11/26/04, EAST search

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	2	(("5292849") or ("4824875")).PN.	US-PGPUB; USPAT	OR	OFF	2004/11/26 12:19
S2	271	522/148.ccls.	US-PGPUB; USPAT	OR	OFF	2004/11/24 16:06
S3	277	522/148.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/11/24 16:48
S4	68	522/148.ccls. and (trimethoxy$ or triethoxy$)	US-PGPUB; USPAT; USOCR	OR	OFF	2004/11/26 09:40
S5	0	qo-9325604-$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/11/26 11:35
S6	2	wo-9325604-$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/11/26 11:37
S7	1	1994-007475.NRAN.	DERWENT	OR	OFF	2004/11/26 11:35
S8	2	de-19515756-$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/11/26 11:40
S9	2	jp-09143399-$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/11/26 11:39
S10	1	de-19623501-$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/11/26 11:44
S11	1	1998-034958.NRAN.	DERWENT	OR	OFF	2004/11/26 11:41
S12	2	ep-816094-$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/11/26 11:44

S13	1	1998-054672.NRAN.	DERWENT	OR	OFF	2004/11/26 11:45

STN search for 10/030910

Connecting via Winsock to STN

STN Database Search Transcript

11/26/04 cited in search Notes

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NEWS	8	OCT 28	KOREAPAT now available on STN
NEWS	9	NOV 18	Current-awareness alerts, saved answer sets, and current search transcripts to be affected by CERAB, COMPUAB, ELCOM, and SOLIDSTATE reloads

NEWS EXPRESS	OCTOBER 29 CURRENT WINDOWS VERSION IS V7.01A, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004
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* * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 11:28:17 ON 26 NOV 2004

=> file reg
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 11:28:27 ON 26 NOV 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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STN search for 10/030910

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 24 NOV 2004 HIGHEST RN 788132-72-9
DICTIONARY FILE UPDATES: 24 NOV 2004 HIGHEST RN 788132-72-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> s trimethoxysilane
L1 4502 TRIMETHOXYSILANE

=> s acryl and l1
AND IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s acryl? and l1
108760 ACRYL?
L2 1725 ACRYL? AND L1

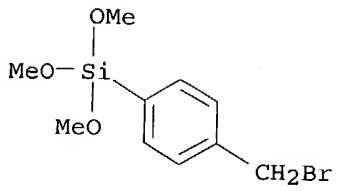
=> s l2 and phenyl
10783983 PHENYL
L3 224 L2 AND PHENYL

=> d 224

L3 ANSWER 224 OF 224 REGISTRY COPYRIGHT 2004 ACS on STN
RN 36786-69-3 REGISTRY
CN **2-Propenoic acid, 2-methyl-, methyl ester, polymer with [4-(bromomethyl)phenyl]trimethoxysilane (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **Silane, [4-(bromomethyl)phenyl]trimethoxy-, polymer with methyl 2-methyl-2-propenoate (9CI)**
OTHER NAMES:
CN **[p-(Bromomethyl)phenyl]trimethoxysilane-methyl methacrylate polymer**
MF (C10 H15 Br O3 Si . C5 H8 O2)x
CI PMS
PCT Polyacrylic, Polyother
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation)

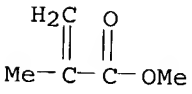
CM 1

CRN 17021-99-7
CMF C10 H15 Br O3 Si



CM 2

CRN 80-62-6
CMF C5 H8 O2



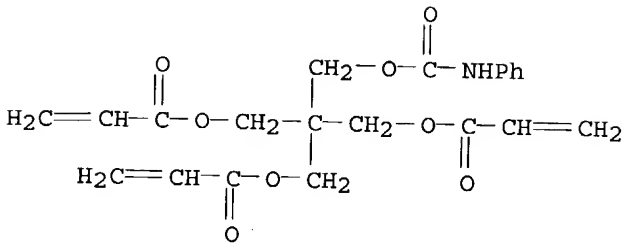
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> d 223

L3 ANSWER 223 OF 224 REGISTRY COPYRIGHT 2004 ACS on STN
RN 42751-69-9 REGISTRY
CN **2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with 2-[[(1-oxo-2-propenyl)oxy]methyl]-2-[[[(phenylamino)carbonyl]oxy]methyl]-1,3-propanediyl di-2-propenoate and 1-propene (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **1-Propene, polymer with 2-[[(1-oxo-2-propenyl)oxy]methyl]-2-[[[(phenylamino)carbonyl]oxy]methyl]-1,3-propanediyl di-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)**
CN **2-Propenoic acid, 2-[[(1-oxo-2-propenyl)oxy]methyl]-2-[[[(phenylamino)carbonyl]oxy]methyl]-1,3-propanediyl ester, polymer with 1-propene and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)**
OTHER NAMES:
CN **γ-(Methacryloyloxy)propyltrimethoxysilane-propylene-2,2,2-tris(acryloyloxymethyl)ethyl phenylcarbamate polymer**
MF (C21 H23 N O8 . C10 H20 O5 Si . C3 H6)x
CI PMS
PCT Polyacrylic, Polyolefin

CM 1

CRN 41203-79-6
CMF C21 H23 N O8



CM 2

CRN 2530-85-0
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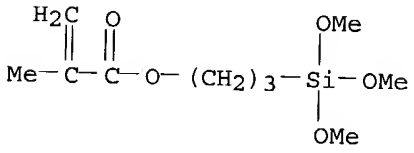
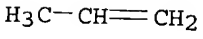


CM 3

CRN 115-07-1
CMF C3 H6



=> d his

(FILE 'HOME' ENTERED AT 11:28:17 ON 26 NOV 2004)

FILE 'REGISTRY' ENTERED AT 11:28:27 ON 26 NOV 2004
L1 4502 S TRIMETHOXYSILANE
L2 1725 S ACRYL? AND L1
L3 224 S L2 AND PHENYL

=> s l2 and diphenyl
681946 DIPHENYL
L4 16 L2 AND DIPHENYL

=> d 1-16

L4 ANSWER 1 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN
RN 692728-38-4 REGISTRY
CN **2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate, butyl 2-propenoate, cyclohexyl 2-methyl-2-propenoate, dimethoxydiphenylsilane, methyl 2-methyl-2-propenoate, trimethoxymethylsilane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate, ammonium salt (9CI)** (CA INDEX NAME)

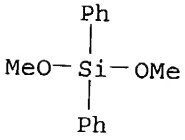
OTHER NAMES:
CN **Butyl acrylate-butyl methacrylate-cyclohexyl methacrylate-diphenyldimethoxysilane-methacrylic acid-γ-methacryloxypropyltrimethoxysilane-methyl methacrylate-methyltrimethoxysilane copolymer ammonium salt**
MF (C14 H16 O2 Si . C10 H20 O5 Si . C10 H16 O2 . C8 H14 O2 . C7 H12 O2 . C5 H8 O2 . C4 H12 O3 Si . C4 H6 O2)x . x H3 N
PCT Polyacrylic, Polyother
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); PRP (Properties); USES (Uses)

CM 1

CRN 692728-37-3
CMF (C14 H16 O2 Si . C10 H20 O5 Si . C10 H16 O2 . C8 H14 O2 . C7 H12 O2 . C5 H8 O2 . C4 H12 O3 Si . C4 H6 O2)x
CCI PMS

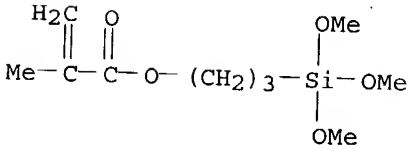
CM 2

CRN 6843-66-9
CMF C14 H16 O2 Si



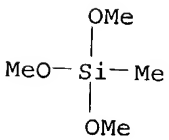
CM 3

CRN 2530-85-0
CMF C10 H20 O5 Si



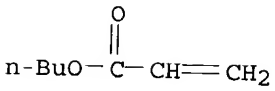
CM 4

CRN 1185-55-3
CMF C4 H12 O3 Si



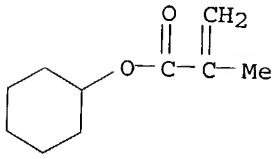
CM 5

CRN 141-32-2
CMF C7 H12 O2



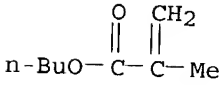
CM 6

CRN 101-43-9
CMF C10 H16 O2



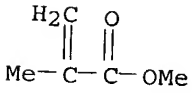
CM 7

CRN 97-88-1
CMF C8 H14 O2



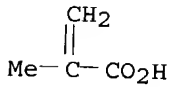
CM 8

CRN 80-62-6
CMF C5 H8 O2



CM 9

CRN 79-41-4
CMF C4 H6 O2



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

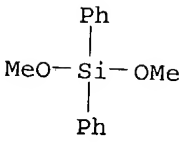
L4 ANSWER 2 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN
RN 692728-36-2 REGISTRY
CN **2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate, butyl 2-propenoate, cyclohexyl 2-methyl-2-propenoate, dimethoxydiphenylsilane, methyl 2-methyl-2-propenoate, trimethoxymethylsilane, trimethoxyphenylsilane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate, ammonium salt (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN **Butyl acrylate-butyl methacrylate-cyclohexyl methacrylate-diphenyldimethoxysilane-methacrylic acid-γ-methacryloxypropyltrimethoxysilane-methyl methacrylate-methyltrimethoxysilane-phenyltrimethoxysilane copolymer ammonium salt**
MF (C14 H16 O2 Si . C10 H20 O5 Si . C10 H16 O2 . C9 H14 O3 Si . C8 H14 O2 . C7 H12 O2 . C5 H8 O2 . C4 H12 O3 Si . C4 H6 O2)x . x H3 N
PCT Polyacrylic, Polyether
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); PRP (Properties); USES (Uses)

CM 1

CRN 692728-35-1
CMF (C14 H16 O2 Si . C10 H20 O5 Si . C10 H16 O2 . C9 H14 O3 Si . C8 H14 O2 . C7 H12 O2 . C5 H8 O2 . C4 H12 O3 Si . C4 H6 O2)x
CCI PMS

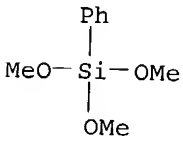
CM 2

CRN 6843-66-9
CMF C14 H16 O2 Si



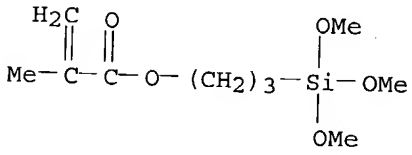
CM 3

CRN 2996-92-1
CMF C9 H14 O3 Si



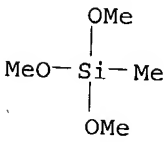
CM 4

CRN 2530-85-0
CMF C10 H20 O5 Si



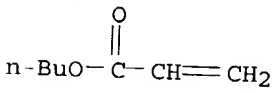
CM 5

CRN 1185-55-3
CMF C4 H12 O3 Si



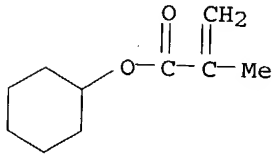
CM 6

CRN 141-32-2
CMF C7 H12 O2



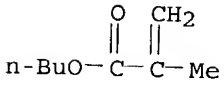
CM 7

CRN 101-43-9
CMF C10 H16 O2



CM 8

CRN 97-88-1
CMF C8 H14 O2



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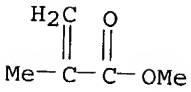

CM 10

CRN 79-41-4
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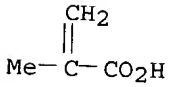

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 3 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN
RN 692728-34-0 REGISTRY
CN **2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate, butyl 2-propenoate, cyclohexyl 2-methyl-2-propenoate, dimethoxydiphenylsilane, methyl 2-methyl-2-propenoate, trimethoxyphenylsilane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate, ammonium salt (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN **Butyl acrylate-butyl methacrylate-cyclohexyl methacrylate-diphenyldimethoxysilane-methacrylic acid-γ-methacryloxypropyltrimethoxysilane-methyl methacrylate-phenyltrimethoxysilane copolymer ammonium salt**

STN search for 10/030910

MF (C14 H16 O2 Si . C10 H20 O5 Si . C10 H16 O2 . C9 H14 O3 Si . C8 H14 O2 . C7 H12 O2 . C5 H8 O2 . C4 H6 O2)x . x H3 N
PCT Polyacrylic, Polyother
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); PRP (Properties); USES (Uses)

CM 1

CRN 692728-33-9
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CCI PMS

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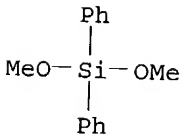
CRN 6843-66-9
CMF C14 H16 O2 Si



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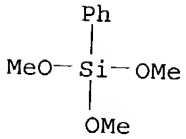

CM 4

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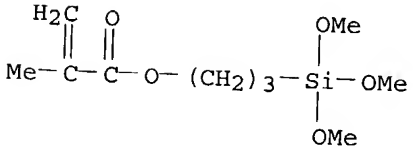

CM 5

CRN 141-32-2

STN search for 10/030910

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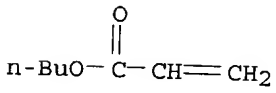

CM 6

CRN 101-43-9
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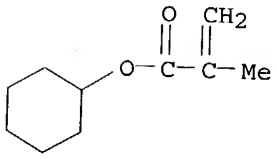
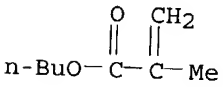


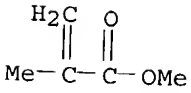
CM 7

CRN 97-88-1
CMF C8 H14 O2



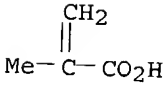
CM 8

CRN 80-62-6
CMF C5 H8 O2



CM 9

CRN 79-41-4
CMF C4 H6 O2



1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

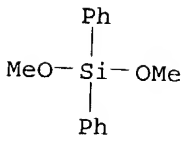
L4 ANSWER 4 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN
RN 692728-32-8 REGISTRY
CN **2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate, cyclohexyl 2-methyl-2-propenoate, dimethoxydiphenylsilane, methyl 2-methyl-2-propenoate, trimethoxymethylsilane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate, ammonium salt (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN **Butyl acrylate-cyclohexyl methacrylate-diphenyldimethoxysilane-methacrylic acid-γ-methacryloxypropyltrimethoxysilane-methyl methacrylate-methyltrimethoxysilane copolymer ammonium salt**
MF (C14 H16 O2 Si . C10 H20 O5 Si . C10 H16 O2 . C7 H12 O2 . C5 H8 O2 . C4 H12 O3 Si . C4 H6 O2)x . x H3 N
PCT Polyacrylic, Polyether
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); PRP (Properties); USES (Uses)

CM 1

CRN 692728-31-7
CMF (C14 H16 O2 Si . C10 H20 O5 Si . C10 H16 O2 . C7 H12 O2 . C5 H8 O2 . C4 H12 O3 Si . C4 H6 O2)x
CCI PMS

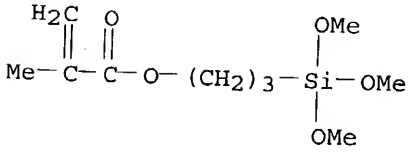
CM 2

CRN 6843-66-9
CMF C14 H16 O2 Si



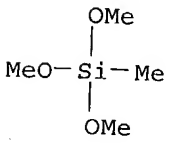
CM 3

CRN 2530-85-0
CMF C10 H20 O5 Si



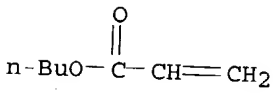
CM 4

CRN 1185-55-3
CMF C4 H12 O3 Si



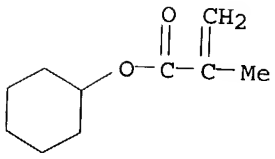
CM 5

CRN 141-32-2
CMF C7 H12 O2



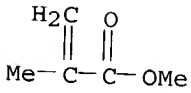
CM 6

CRN 101-43-9
CMF C10 H16 O2



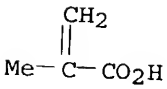
CM 7

CRN 80-62-6
CMF C5 H8 O2



CM 8

CRN 79-41-4
CMF C4 H6 O2

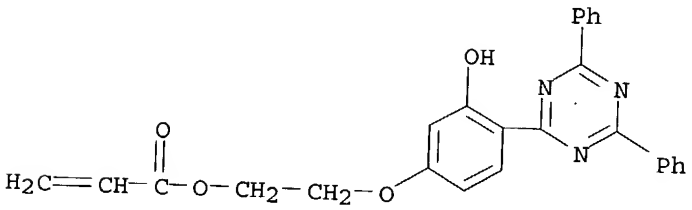


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 5 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN
RN 581771-99-5 REGISTRY
CN **2-Propenoic acid, 2-methyl-, cyclohexyl ester, polymer with 4-benzoyl-3-hydroxyphenyl 2-propenoate, butyl 2-propenoate, dimethoxydimethylsilane, N-[3-(dimethoxymethylsilyl)propyl]-1,2-ethanediamine, 2-[4-(4,6-diphenyl-1,3,5-triazin-2-yl)-3-hydroxyphenoxy]ethyl 2-propenoate, 2-ethylhexyl 2-propenoate, methyl 2-methyl-2-propenoate, 1,2,2,6,6-pentamethyl-4-piperidinyl 2-methyl-2-propenoate, silicic acid (H4SiO4) tetramethyl ester and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN **ADK Stab LA 82-N-(2-aminoethyl)-3-aminopropylmethyldimethoxysilane-butyl acrylate-cyclohexyl methacrylate-dimethyldimethoxysilane-2,4-diphenyl-6-[2-hydroxy-4-(2-acryloyloxyethoxy)]-s-triazine-2-ethylhexyl acrylate-2-hydroxy-4-(acryloyloxyethoxy)benzophenone-3-methacryloxypropyltrimethoxysilane-methyl methacrylate-tetramethoxysilane copolymer**
MF (C26 H21 N3 O4 . C16 H12 O4 . C14 H25 N O2 . C11 H20 O2 . C10 H20 O5 Si . C10 H16 O2 . C8 H22 N2 O2 Si . C7 H12 O2 . C5 H8 O2 . C4 H12 O4 Si . C4 H12 O2 Si)x
CI PMS
PCT Polyacrylic, Polyother
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); USES (Uses)

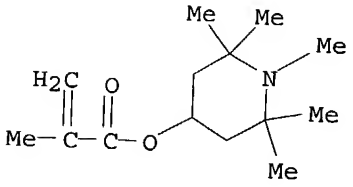
CM 1

CRN 176225-24-4
CMF C26 H21 N3 O4



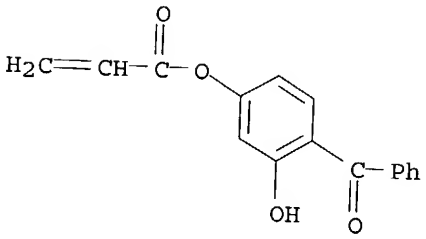
CM 2

CRN 68548-08-3
CMF C14 H25 N O2



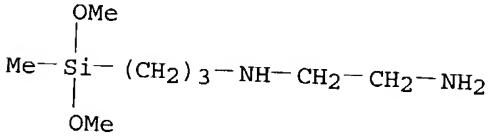
CM 3

CRN 15419-94-0
CMF C16 H12 O4



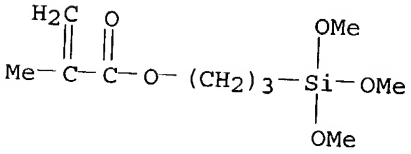
CM 4

CRN 3069-29-2
CMF C8 H22 N2 O2 Si



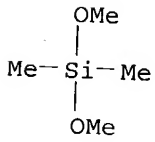
CM 5

CRN 2530-85-0
CMF C10 H20 O5 Si



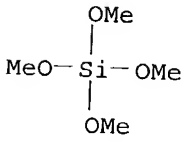
CM 6

CRN 1112-39-6
CMF C4 H12 O2 Si



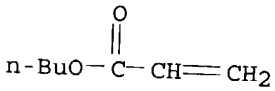
CM 7

CRN 681-84-5
CMF C4 H12 O4 Si



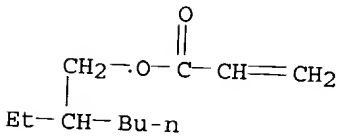
CM 8

CRN 141-32-2
CMF C7 H12 O2



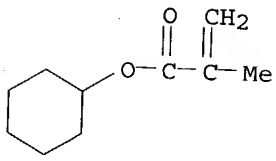
CM 9

CRN 103-11-7
CMF C11 H20 O2



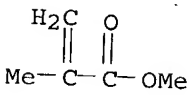
CM 10

CRN 101-43-9
CMF C10 H16 O2



CM 11

CRN 80-62-6
CMF C5 H8 O2

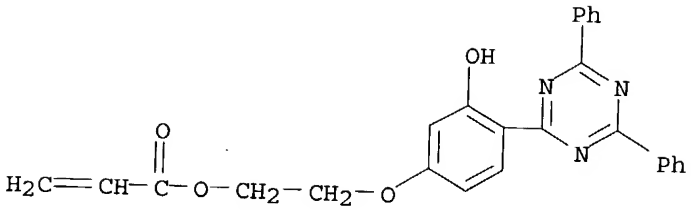


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 6 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN
RN 581771-98-4 REGISTRY
CN **2-Propenoic acid, 2-methyl-, 2-[3-(2H-benzotriazol-2-yl)-4-hydroxyphenyl]ethyl ester, polymer with butyl 2-propenoate, cyclohexyl 2-methyl-2-propenoate, dimethoxydimethylsilane, N-[3-(dimethoxymethylsilyl)propyl]-1,2-ethanediamine, 2-[4-(4,6-diphenyl-1,3,5-triazin-2-yl)-3-hydroxyphenoxy]ethyl 2-propenoate, 2-ethylhexyl 2-propenoate, methyl 2-methyl-2-propenoate, 1,2,2,6,6-pentamethyl-4-piperidinyl 2-methyl-2-propenoate, silicic acid (H4SiO4) tetramethyl ester and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN **ADK Stab LA 82-N-(2-aminoethyl)-3-aminopropylmethyldimethoxysilane-butyl acrylate-cyclohexyl methacrylate-dimethyldimethoxysilane-2,4-diphenyl-6-[2-hydroxy-4-(2-acryloyloxyethoxy)]-s-triazine-2-ethylhexyl acrylate-3-methacryloxypropyltrimethoxysilane-methyl methacrylate-RUVA 93-tetramethoxysilane copolymer**
MF (C26 H21 N3 O4 . C18 H17 N3 O3 . C14 H25 N O2 . C11 H20 O2 . C10 H20 O5 Si . C10 H16 O2 . C8 H22 N2 O2 Si . C7 H12 O2 . C5 H8 O2 . C4 H12 O4 Si . C4 H12 O2 Si)x
CI PMS
PCT Polyacrylic, Polyother
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); USES (Uses)

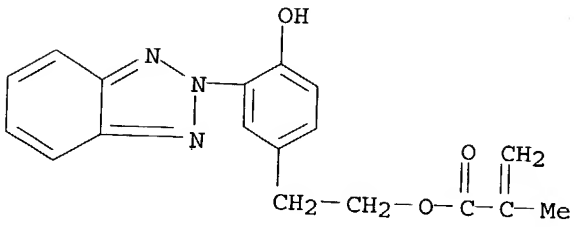
CM 1

CRN 176225-24-4
CMF C26 H21 N3 O4



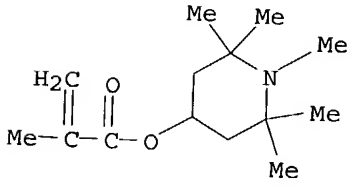
CM 2

CRN 96478-09-0
CMF C18 H17 N3 O3



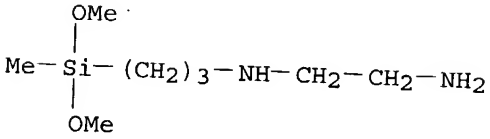
CM 3

CRN 68548-08-3
CMF C14 H25 N O2



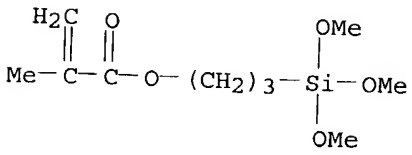
CM 4

CRN 3069-29-2
CMF C8 H22 N2 O2 Si



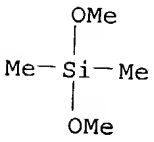
CM 5

CRN 2530-85-0
CMF C10 H20 O5 Si



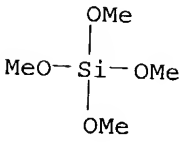
CM 6

CRN 1112-39-6
CMF C4 H12 O2 Si



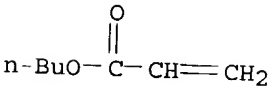
CM 7

CRN 681-84-5
CMF C4 H12 O4 Si



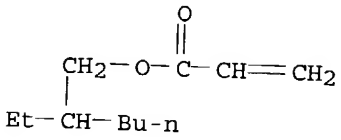
CM 8

CRN 141-32-2
CMF C7 H12 O2



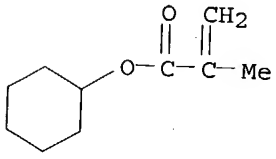
CM 9

CRN 103-11-7
CMF C11 H20 O2



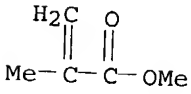
CM 10

CRN 101-43-9
CMF C10 H16 O2



CM 11

CRN 80-62-6
CMF C5 H8 O2



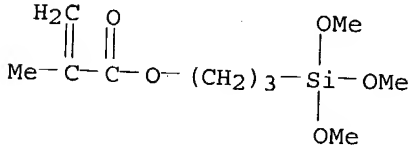
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 7 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN
RN 320717-37-1 REGISTRY
CN **2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with diphenylsilanediol and trimethoxy(3,3,3-trifluoropropyl)silane (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **Silane, trimethoxy(3,3,3-trifluoropropyl)-, polymer with diphenylsilanediol and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)**
CN **Silanediol, diphenyl-, polymer with 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate and trimethoxy(3,3,3-trifluoropropyl)silane (9CI)**
OTHER NAMES:
CN **Diphenylsilanediol-(3-methacryloyloxypropyl)trimethoxysilane-trimethoxy(3,3,3-trifluoropropyl)silane copolymer**
CN **Diphenylsilanediol-γ-methacryloxypropyltrimethoxysilane-3,3,3-trifluoropropyltrimethoxysilane copolymer**
MF (C12 H12 O2 Si . C10 H20 O5 Si . C6 H13 F3 O3 Si)x
CI PMS
PCT Polyacrylic, Polyether
SR CA
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent

RL.P Roles from patents: PREP (Preparation); PRP (Properties); USES (Uses)
RL.NP Roles from non-patents: PREP (Preparation); PRP (Properties); USES (Uses)

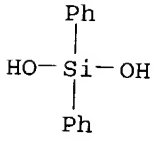
CM 1

CRN 2530-85-0
CMF C10 H20 O5 Si



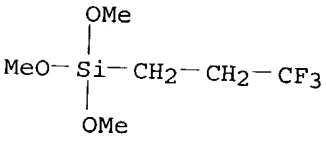
CM 2

CRN 947-42-2
CMF C12 H12 O2 Si



CM 3

CRN 429-60-7
CMF C6 H13 F3 O3 Si



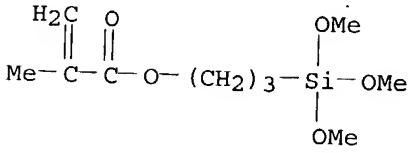
6 REFERENCES IN FILE CA (1907 TO DATE)
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 8 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN
RN 320717-36-0 REGISTRY
CN **2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with diphenylsilanediol (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **Silanediol, diphenyl-, polymer with 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)**
OTHER NAMES:
CN **Diphenylsilanediol-(3-methacryloyloxypropyl)trimethoxysilane copolymer**
CN **Diphenylsilanediol-3-(trimethoxysilyl)propyl methacrylate copolymer**

CN **Diphenylsilanediol-3-methacryloxypropyltrimethoxysilane copolymer**
CN Ormocer I
MF (C12 H12 O2 Si . C10 H20 O5 Si)x
CI PMS
PCT Polyacrylic, Polyother
SR CA
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation); PROC (Process); PRP (Properties); USES (Uses)
RL.NP Roles from non-patents: PREP (Preparation); PROC (Process); PRP (Properties); USES (Uses)

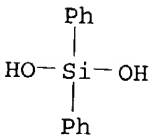
CM 1

CRN 2530-85-0
CMF C10 H20 O5 Si



CM 2

CRN 947-42-2
CMF C12 H12 O2 Si



11 REFERENCES IN FILE CA (1907 TO DATE)
11 REFERENCES IN FILE CAPLUS (1907 TO DATE)

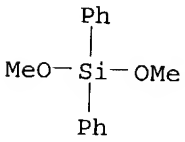
L4 ANSWER 9 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN
RN 308241-88-5 REGISTRY
CN **2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with dimethoxydiphenylsilane, octamethylcyclotetrasiloxane and trimethoxymethylsilane (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **Cyclotetrasiloxane, octamethyl-, polymer with dimethoxydiphenylsilane, trimethoxymethylsilane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)**
CN **Silane, dimethoxydiphenyl-, polymer with octamethylcyclotetrasiloxane, trimethoxymethylsilane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)**
CN **Silane, trimethoxymethyl-, polymer with dimethoxydiphenylsilane, octamethylcyclotetrasiloxane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)**
OTHER NAMES:
CN **Dimethoxydiphenylsilane-γ-methacryloxypropyltrimethoxysilane-**

methyltrimethoxysilane-octamethylcyclotetrasiloxane copolymer

MF (C14 H16 O2 Si . C10 H20 O5 Si . C8 H24 O4 Si4 . C4 H12 O3 Si)x
CI PMS
PCT Polyacrylic, Polyether
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); USES (Uses)

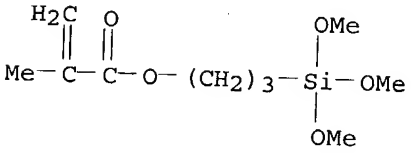
CM 1

CRN 6843-66-9
CMF C14 H16 O2 Si



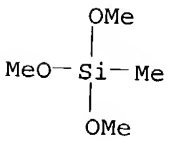
CM 2

CRN 2530-85-0
CMF C10 H20 O5 Si



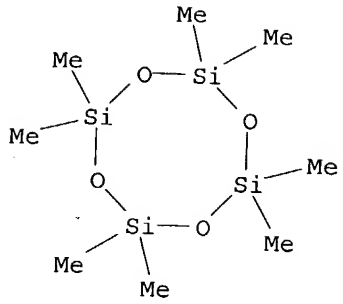
CM 3

CRN 1185-55-3
CMF C4 H12 O3 Si



CM 4

CRN 556-67-2
CMF C8 H24 O4 Si4

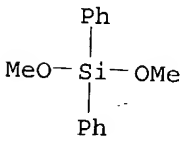


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 10 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN
RN 308241-87-4 REGISTRY
CN **2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with dimethoxydiphenylsilane and octamethylcyclotetrasiloxane (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **Cyclotetrasiloxane, octamethyl-, polymer with dimethoxydiphenylsilane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)**
CN **Silane, dimethoxydiphenyl-, polymer with octamethylcyclotetrasiloxane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)**
OTHER NAMES:
CN **Dimethoxydiphenylsilane-γ-methacryloxypropyltrimethoxysilane-octamethylcyclotetrasiloxane copolymer**
MF (C14 H16 O2 Si . C10 H20 O5 Si . C8 H24 O4 Si4)x
CI PMS
PCT Polyacrylic, Polyother
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); USES (Uses)

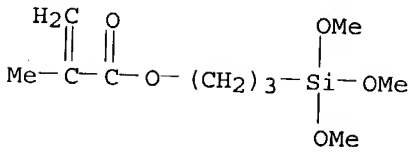
CM 1

CRN 6843-66-9
CMF C14 H16 O2 Si



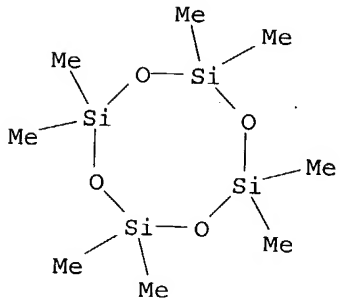
CM 2

CRN 2530-85-0
CMF C10 H20 O5 Si



CM 3

CRN 556-67-2
CMF C8 H24 O4 Si4



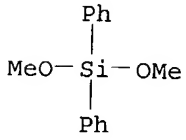
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 11 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN
RN 296240-27-2 REGISTRY
CN **2-Propenoic acid, 2-methyl-, methyl ester, polymer with dimethoxydiphenylsilane, octamethylcyclotetrasiloxane and 3-(trimethoxysilyl)propyl 2-propenoate, graft (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **2-Propenoic acid, 3-(trimethoxysilyl)propyl ester, polymer with dimethoxydiphenylsilane, methyl 2-methyl-2-propenoate and octamethylcyclotetrasiloxane, graft (9CI)**
CN **Cyclotetrasiloxane, octamethyl-, polymer with dimethoxydiphenylsilane, methyl 2-methyl-2-propenoate and 3-(trimethoxysilyl)propyl 2-propenoate, graft (9CI)**
CN **Silane, dimethoxydiphenyl-, polymer with methyl 2-methyl-2-propenoate, octamethylcyclotetrasiloxane and 3-(trimethoxysilyl)propyl 2-propenoate, graft (9CI)**
OTHER NAMES:
CN **γ-Acryloyloxypropyltrimethoxysilane-diphenyldimethoxysilane-methyl methacrylate-octamethylcyclotetrasiloxane graft copolymer**
MF (C14 H16 O2 Si . C9 H18 O5 Si . C8 H24 O4 Si4 . C5 H8 O2)x
CI PMS
PCT Polyacrylic, Polyother
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); PRP (Properties); USES (Uses)

CM 1

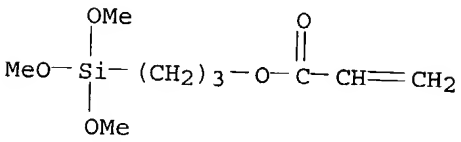
CRN 6843-66-9

CMF C14 H16 O2 Si



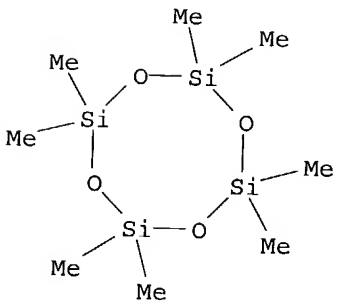
CM 2

CRN 4369-14-6
CMF C9 H18 O5 Si



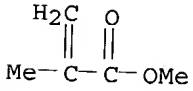
CM 3

CRN 556-67-2
CMF C8 H24 O4 Si4



CM 4

CRN 80-62-6
CMF C5 H8 O2



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

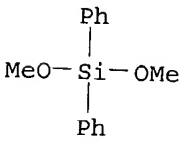
L4 ANSWER 12 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN

STN search for 10/030910

RN 296240-26-1 REGISTRY
CN **2-Propenoic acid, 3-(trimethoxysilyl)propyl ester, polymer with dimethoxydiphenylsilane, ethenylbenzene, octamethylcyclotetrasiloxane and 2-propenenitrile, graft (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **2-Propenenitrile, polymer with dimethoxydiphenylsilane, ethenylbenzene, octamethylcyclotetrasiloxane and 3-(trimethoxysilyl)propyl 2-propenoate, graft (9CI)**
CN **Benzene, ethenyl-, polymer with dimethoxydiphenylsilane, octamethylcyclotetrasiloxane, 2-propenenitrile and 3-(trimethoxysilyl)propyl 2-propenoate, graft (9CI)**
CN **Cyclotetrasiloxane, octamethyl-, polymer with dimethoxydiphenylsilane, ethenylbenzene, 2-propenenitrile and 3-(trimethoxysilyl)propyl 2-propenoate, graft (9CI)**
CN **Silane, dimethoxydiphenyl-, polymer with ethenylbenzene, octamethylcyclotetrasiloxane, 2-propenenitrile and 3-(trimethoxysilyl)propyl 2-propenoate, graft (9CI)**
OTHER NAMES:
CN **Acrylonitrile-γ-acryloyloxypropyltrimethoxysilane-diphenyldimethoxysilane-octamethylcyclotetrasiloxane-styrene graft copolymer**
MF (C14 H16 O2 Si . C9 H18 O5 Si . C8 H24 O4 Si4 . C8 H8 . C3 H3 N)x
CI PMS
PCT Polyacrylic, Polyother, Polystyrene
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); PRP (Properties); USES (Uses)

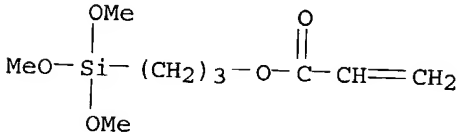
CM 1

CRN 6843-66-9
CMF C14 H16 O2 Si



CM 2

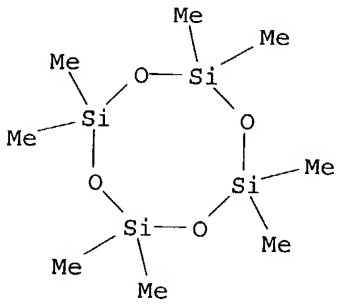
CRN 4369-14-6
CMF C9 H18 O5 Si



CM 3

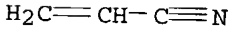
CRN 556-67-2

CMF C8 H24 O4 Si4



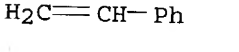
CM 4

CRN 107-13-1
CMF C3 H3 N



CM 5

CRN 100-42-5
CMF C8 H8



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

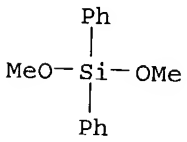
L4 ANSWER 13 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN
RN 273398-06-4 REGISTRY
CN **Silicic acid (H4SiO4), tetraethyl ester, polymer with dimethoxydiphenylsilane, 1,1,3,3,5,5,7,7-octamethyltetrasiloxane, trimethoxymethylsilane and 3-(trimethoxysilyl)propyl 2-propenoate (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **2-Propenoic acid, 3-(trimethoxysilyl)propyl ester, polymer with dimethoxydiphenylsilane, 1,1,3,3,5,5,7,7-octamethyltetrasiloxane, silicic acid (H4SiO4) tetraethyl ester and trimethoxymethylsilane (9CI)**
CN **Silane, dimethoxydiphenyl-, polymer with 1,1,3,3,5,5,7,7-octamethyltetrasiloxane, silicic acid (H4SiO4) tetraethyl ester, trimethoxymethylsilane and 3-(trimethoxysilyl)propyl 2-propenoate (9CI)**
CN **Silane, trimethoxymethyl-, polymer with dimethoxydiphenylsilane, 1,1,3,3,5,5,7,7-octamethyltetrasiloxane, silicic acid (H4SiO4) tetraethyl ester and 3-(trimethoxysilyl)propyl 2-propenoate (9CI)**
CN **Tetrasiloxane, 1,1,3,3,5,5,7,7-octamethyl-, polymer with dimethoxydiphenylsilane, silicic acid (H4SiO4) tetraethyl ester, trimethoxymethylsilane and 3-(trimethoxysilyl)propyl 2-propenoate (9CI)**
OTHER NAMES:
CN **3-Acryloyloxypropyltrimethoxysilane-diphenyldimethoxysilane-**

methyltrimethoxysilane-octamethyltetrasiloxane-tetraethoxysilane copolymer

MF (C14 H16 O2 Si . C9 H18 O5 Si . C8 H26 O3 Si4 . C8 H20 O4 Si . C4 H12 O3 Si)x
CI PMS
PCT Polyacrylic, Polyother
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); USES (Uses)

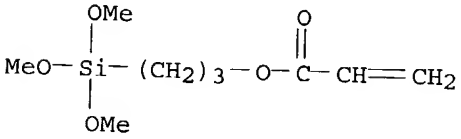
CM 1

CRN 6843-66-9
CMF C14 H16 O2 Si



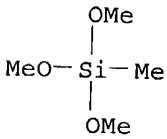
CM 2

CRN 4369-14-6
CMF C9 H18 O5 Si



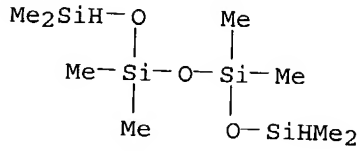
CM 3

CRN 1185-55-3
CMF C4 H12 O3 Si



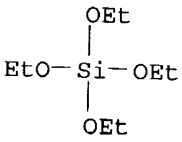
CM 4

CRN 1000-05-1
CMF C8 H26 O3 Si4



CM 5

CRN 78-10-4
CMF C8 H20 O4 Si

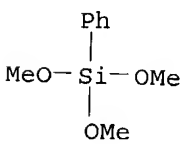


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 14 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN
RN 201404-82-2 REGISTRY
CN **2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with diphenylsilanediol and trimethoxyphenylsilane (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **Silane, trimethoxyphenyl-, polymer with diphenylsilanediol and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)**
CN **Silanediol, diphenyl-, polymer with trimethoxyphenylsilane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)**
OTHER NAMES:
CN **Diphenylsilanediol-phenyltrimethoxysilane-3-(trimethoxysilyl)propyl methacrylate copolymer**
MF (C12 H12 O2 Si . C10 H20 O5 Si . C9 H14 O3 Si)x
CI PMS
PCT Polyacrylic, Polyether
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Conference; Patent
RL.P Roles from patents: PREP (Preparation); PRP (Properties); USES (Uses)
RL.NP Roles from non-patents: PREP (Preparation); PRP (Properties); USES (Uses)

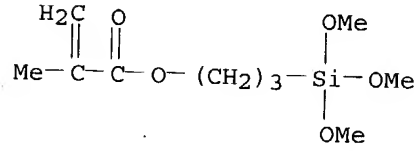
CM 1

CRN 2996-92-1
CMF C9 H14 O3 Si



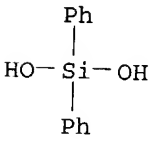
CM 2

CRN 2530-85-0
CMF C10 H20 O5 Si



CM 3

CRN 947-42-2
CMF C12 H12 O2 Si

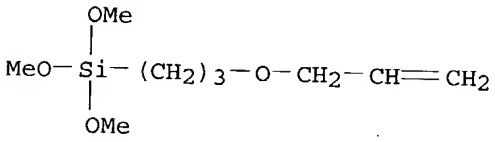


2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 15 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN
RN 192062-33-2 REGISTRY
CN **7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester, polymer with diphenylsilanediol, trimethoxymethylsilane and trimethoxy[3-(2-propenyloxy)propyl]silane (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **Silane, trimethoxymethyl-, polymer with diphenylsilanediol, 7-oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate and trimethoxy[3-(2-propenyloxy)propyl]silane (9CI)**
CN **Silane, trimethoxy[3-(2-propenyloxy)propyl]-, polymer with diphenylsilanediol, 7-oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate and trimethoxymethylsilane (9CI)**
CN **Silanediol, diphenyl-, polymer with 7-oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate, trimethoxymethylsilane and trimethoxy[3-(2-propenyloxy)propyl]silane (9CI)**
OTHER NAMES:
CN **γ-Acryloxypropyltrimethoxysilane-diphenylsilanediol-ERL 4221-methyltrimethoxysilane copolymer**
MF (C14 H20 O4 . C12 H12 O2 Si . C9 H20 O4 Si . C4 H12 O3 Si)x
CI PMS
PCT Epoxy resin, Polyester, Polyother, Polyvinyl
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: PROC (Process); USES (Uses)

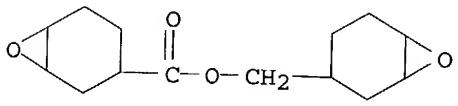
CM 1

CRN 81854-57-1
CMF C9 H20 O4 Si



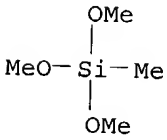
CM 2

CRN 2386-87-0
CMF C14 H20 O4



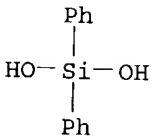
CM 3

CRN 1185-55-3
CMF C4 H12 O3 Si



CM 4

CRN 947-42-2
CMF C12 H12 O2 Si



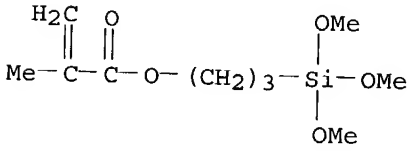
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 16 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN
RN 158063-70-8 REGISTRY
CN **2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with diphenylsilanediol, silicic acid (H4SiO4) tetraethyl ester and**

trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **Silane, trimethoxy[3-(oxiranylmethoxy)propyl]-, polymer with diphenylsilanediol, silicic acid (H4SiO4) tetraethyl ester and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)**
CN **Silanediol, diphenyl-, polymer with silicic acid (H4SiO4) tetraethyl ester, trimethoxy[3-(oxiranylmethoxy)propyl]silane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)**
CN **Silicic acid (H4SiO4), tetraethyl ester, polymer with diphenylsilanediol, trimethoxy[3-(oxiranylmethoxy)propyl]silane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)**
OTHER NAMES:
CN **Diphenylsilanediol-(3-glycidoxypropyl)trimethoxysilane-tetraethoxysilane-3-(trimethoxysilyl)propyl methacrylate copolymer**
DR 200568-19-0
MF (C12 H12 O2 Si . C10 H20 O5 Si . C9 H20 O5 Si . C8 H20 O4 Si)x
CI PMS
PCT Polyacrylic, Polyether, Polyether formed, Polyother
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); PRP (Properties); USES (Uses)

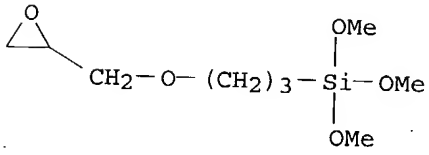
CM 1

CRN 2530-85-0
CMF C10 H20 O5 Si



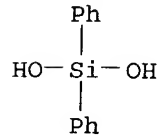
CM 2

CRN 2530-83-8
CMF C9 H20 O5 Si



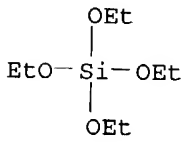
CM 3

CRN 947-42-2
CMF C12 H12 O2 Si



CM 4

CRN 78-10-4
CMF C8 H20 O4 Si



4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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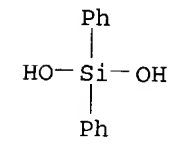
=> s 947-42-2
L5            1 947-42-2
                (947-42-2/RN)

=> d

L5   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2004 ACS on STN
RN   947-42-2  REGISTRY
CN   Silanediol, diphenyl- (8CI, 9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   D 6150
CN   Dihydroxydiphenylsilane
CN   Diphenyldihydroxysilane
CN   Diphenylsilanediol
CN   NSC 12561
CN   SX 11
CN   SX 11 (diol)
CN   TSL 8162
FS   3D CONCORD
MF   C12 H12 O2 Si
CI   COM
LC   STN Files:   AGRICOLA, BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT,
       CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DETHERM*, GMELIN*,
       HODOC*, IFICDB, IFIPAT, IFIUDB, MEDLINE, PIRA, PROMT, RTECS*, SPECINFO,
       TOXCENTER, USPAT2, USPATFULL
         (*File contains numerically searchable property data)
     Other Sources:   DSL**, EINECS**, TSCA**
         (**Enter CHEMLIST File for up-to-date regulatory information)
DT.CA  CAplus document type:  Conference; Dissertation; Journal; Patent; Report
RL.P   Roles from patents:  ANST (Analytical study); BIOL (Biological study);
       PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or
       reagent); USES (Uses); NORL (No role in record)
RLD.P  Roles for non-specific derivatives from patents:  MSC (Miscellaneous);
       PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or
```

reagent); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)
RLD.NP Roles for non-specific derivatives from non-patents: FORM (Formation, nonpreparative); PREP (Preparation); PRP (Properties); RACT (Reactant or reagent); USES (Uses)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

671 REFERENCES IN FILE CA (1907 TO DATE)
60 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
671 REFERENCES IN FILE CAPLUS (1907 TO DATE)
109 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus

	SINCE FILE ENTRY	TOTAL SESSION
COST IN U.S. DOLLARS		
FULL ESTIMATED COST	53.03	53.24

FILE 'CAPLUS' ENTERED AT 11:31:07 ON 26 NOV 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 26 Nov 2004 VOL 141 ISS 22
FILE LAST UPDATED: 24 Nov 2004 (20041124/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d his

(FILE 'HOME' ENTERED AT 11:28:17 ON 26 NOV 2004)

FILE 'REGISTRY' ENTERED AT 11:28:27 ON 26 NOV 2004
L1 4502 S TRIMETHOXYSILANE

STN search for 10/030910

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L2          1725 S ACRYL? AND L1
L3           224 S L2 AND PHENYL
L4            16 S L2 AND DIPHENYL
L5             1 S 947-42-2

     FILE 'CAPLUS' ENTERED AT 11:31:07 ON 26 NOV 2004

=> s l4
L6            22 L4

=> d all 1-22

L6   ANSWER 1 OF 22  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   2004:451662  CAPLUS
DN   141:24491
ED   Entered STN:  04 Jun 2004
TI   Process for producing polysiloxanes and use of the same
IN   Zha, Congji; Kukulj, Dax
PA   RPO Pty, Ltd., Australia
SO   U.S. Pat. Appl. Publ., 11 pp.
     CODEN: USXXCO
DT   Patent
LA   English
IC   ICM  C08G077-00
NCL  528010000
CC   37-3 (Plastics Manufacture and Processing)
     Section cross-reference(s): 42, 73
FAN.CNT 1
     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
     ---------------      ----   --------    --------------------     --------
PI   US 2004106761         A1    20040603    US 2002-308562           20021202
     US 6818721            B2    20041116
     WO 2004050744         A1    20040617    WO 2003-AU1600           20031201
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO,
             NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
             TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM,
             AZ, BY, KG, KZ
         RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE,
             BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU,
             MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN,
             GQ, GW, ML, MR, NE, SN, TD, TG
PRAI US 2002-308562        A     20021202
CLASS
 PATENT NO.        CLASS   PATENT FAMILY CLASSIFICATION CODES
 --------------    -----   ----------------------------------------------------
 US 2004106761     ICM     C08G077-00
                   NCL     528010000
AB   The present invention relates to a process for the preparation of an
     organosilicon condensate which comprises reacting together (A) ≥1
     silicon containing compound having ≥1 silanol group and (B) ≥1
     silicon containing compound having ≥1 OR group in the presence of a
     calcium or magnesium catalyst selected to allow the reaction to proceed
     and ≥1 solvent.  Advantageous catalysts include calcium hydroxide,
     calcium oxide, magnesium hydroxide or magnesium oxide.  Advantageously the
     solvent may be a protic solvent such as water, methanol, ethanol,
     1-propanol, 2-propanol, 1-butanol and 2-butanol.  The invention also
     relates to condensates, such as siloxanes, prepared by the process.  Thus,
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67.861 g diphenylsilanediol and 77.994 g 3-methacryloyloxypropyltrimethoxy silane were mixed and heated at 80° for 30 min, 0.10 mol% calcium hydroxide and 38.8 mol% (based on total silicon containing compds.) methanol were added therein and reacted at 80° for 1 h to give a copolymer with refractive index 1.5355 and viscosity 2180 cP.

ST process polysiloxane prepn diphenylsilanediol methacryloyloxypropyltrimethoxysilane copolymer; calcium hydroxide catalyst methanol solvent

IT Catalysts
(condensation; process for producing polysiloxanes in protic solvents)

IT Silsesquioxanes
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polysiloxane-, fluorine-containing; process for producing polysiloxanes in protic solvents)

IT Silsesquioxanes
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polysiloxane-; process for producing polysiloxanes in protic solvents)

IT Fluoropolymers, preparation
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polysiloxane-silsesquioxane-; process for producing polysiloxanes in protic solvents)

IT Optical waveguides
(process for producing polysiloxanes in protic solvents)

IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(process for producing polysiloxanes in protic solvents)

IT Solvents
(protic; process for producing polysiloxanes in protic solvents)

IT Polysiloxanes, preparation
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(silsesquioxane-, fluorine-containing; process for producing polysiloxanes in protic solvents)

IT Polysiloxanes, preparation
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(silsesquioxane-; process for producing polysiloxanes in protic solvents)

IT Alcohols, uses
RL: NUU (Other use, unclassified); USES (Uses)
(solvents; process for producing polysiloxanes in protic solvents)

IT 1305-62-0, Calcium hydroxide, uses 1305-78-8, Calcium oxide, uses 1309-42-8, Magnesium hydroxide 1309-48-4, Magnesium oxide, uses 17194-00-2, Barium hydroxide
RL: CAT (Catalyst use); USES (Uses)
(condensation catalyst; process for producing polysiloxanes in protic solvents)

IT **320717-37-1P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(optionally crosslinked; process for producing polysiloxanes in protic solvents)

IT **320717-36-0P**, Diphenylsilanediol-3-methacryloyloxypropyltrimethoxy silane copolymer 697755-09-2P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(process for producing polysiloxanes in protic solvents)

IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 67-63-0, 2-Propanol, uses 71-23-8, 1-Propanol, uses 71-36-3, 1-Butanol, uses 78-92-2, 2-Butanol 7732-18-5, Water, uses
RL: NUU (Other use, unclassified); USES (Uses)
(solvent; process for producing polysiloxanes in protic solvents)
IT 7440-21-3, Silicon, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(substrate; process for producing polysiloxanes in protic solvents)

L6 ANSWER 2 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:433095 CAPLUS
DN 141:8663
ED Entered STN: 28 May 2004
TI Antisoiling water-thinned coating compositions
IN Kamiyama, Yasuyuki; Yamauchi, Toyoaki; Himeta, Yukari
PA Asahi Kasei Chemical Corporation, Japan
SO Jpn. Kokai Tokkyo Koho, 34 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C09D183-00
ICS C09D005-00; C09D005-02; C09D005-16; C09D133-00; C09D155-00; C09D183-10
CC 42-7 (Coatings, Inks, and Related Products)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004149668	A2	20040527	JP 2002-316411	20021030
PRAI	JP 2002-316411		20021030		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2004149668	ICM	C09D183-00
	ICS	C09D005-00; C09D005-02; C09D005-16; C09D133-00; C09D155-00; C09D183-10
JP 2004149668	FTERM	4J038/CD091; 4J038/CG001; 4J038/DG141; 4J038/DL031; 4J038/DL131; 4J038/FA23; 4J038/GA15; 4J038/HA446; 4J038/JC13; 4J038/KA09; 4J038/MA08; 4J038/MA10; 4J038/NA05; 4J038/PB05; 4J038/PB07; 4J038/PC02; 4J038/PC08

AB The compns. contain aqueous dispersions of Ph group-containing silicone structures
and show H2O contact angle of their films ≤75°. Thus, adding an emulsion containing Me methacrylate (I) 25, cyclohexyl methacrylate (II) 50, Bu acrylate (III) 15, methacrylic acid (IV) 10, sulfosuccinate-type surfactant (Pelex OT-P; V) 3, alkylene oxide-containing anionic surfactant (Adeka Reasoap SR 1025A; VI) 4, a 20% solution of alkylene oxide-containing nonionic surfactant (Emulgen 120) 5, and 2% ammonium persulfate 15 parts dropwise to H2O containing sulfosuccinate-type surfactant (Latemul S 180A), heating to 80° for 30 min, further adding an emulsion containing I 109, II 160, III 123, IV 8, V 11, VI 16, 20% Emulgen 120 20, and 2% ammonium persulfate 60 parts and a mixture of γ-methacryloxypropyltrimethoxysilane 1, MeSi(OMe)3 20, and Ph2Si(OMe)2 20 parts sep. to the reactor, heating to 80° for 120 min, cooling, neutralizing with 25% NH4OH, and filtered to give an acrylic emulsion. A coating film prepared from the emulsion showed contact angle 50° and no rain streaks after outdoor exposure 3 mo.
ST phenyl silicone acrylic coating antisoiling; hydrophilic coating phenyl silicone acrylic emulsion
IT Polysiloxanes, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic; antisoiling water-thinned coating compns.)

IT Coating materials
(dispersion, water-thinned; antisoiling water-thinned coating compns.)

IT Polyoxyalkylenes, uses
RL: MOA (Modifier or additive use); USES (Uses)
(surfactants; antisoiling water-thinned coating compns.)

IT 577-11-7, Pelex OT-P
RL: MOA (Modifier or additive use); USES (Uses)
(Aerosol OT 75; antisoiling water-thinned coating compns.)

IT **692728-32-8P**, Butyl acrylate-cyclohexyl methacrylate-diphenyldimethoxysilane-methacrylic acid-γ-methacryloxypropyltrimethoxysilane-methyl methacrylate-methyltrimethoxysilane copolymer ammonium salt **692728-34-0P**, Butyl acrylate-butyl methacrylate-cyclohexyl methacrylate-diphenyldimethoxysilane-methacrylic acid-γ-methacryloxypropyltrimethoxysilane-methyl methacrylate-phenyltrimethoxysilane copolymer ammonium salt **692728-36-2P**, Butyl acrylate-butyl methacrylate-cyclohexyl methacrylate-diphenyldimethoxysilane-methacrylic acid-γ-methacryloxypropyltrimethoxysilane-methyl methacrylate-methyltrimethoxysilane-phenyltrimethoxysilane copolymer ammonium salt **692728-38-4P**, Butyl acrylate-butyl methacrylate-cyclohexyl methacrylate-diphenyldimethoxysilane-methacrylic acid-γ-methacryloxypropyltrimethoxysilane-methyl methacrylate-methyltrimethoxysilane copolymer ammonium salt
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(antisoiling water-thinned coating compns.)

IT 9002-92-0, Emulgen 120 113255-53-1, Latemul S 180A 577974-49-3, Latemul PD 104 693786-45-7, Adeka Reasoap SR 1025A 693786-46-8, Aqualon KH 1025
RL: MOA (Modifier or additive use); USES (Uses)
(antisoiling water-thinned coating compns.)

IT 7631-86-9, Colloidal silica, uses
RL: MOA (Modifier or additive use); USES (Uses)
(colloidal, Adelite AT 30A, Snowtex 30; antisoiling water-thinned coating compns.)

L6 ANSWER 3 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:368579 CAPLUS
DN 141:124077
ED Entered STN: 06 May 2004
TI Effect of photoinitiator on photopolymerization of inorganic-organic hybrid polymers (ORMOCER)
AU Kim, Woo-Soo; Houbertz, Ruth; Lee, Tae-Ho; Bae, Byeong-Soo
CS Laboratory of Optical Materials and Coating (LOMC), Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology (KAIST), Daejon, 305-701, S. Korea
SO Journal of Polymer Science, Part B: Polymer Physics (2004), 42(10), 1979-1986
CODEN: JPBPEM; ISSN: 0887-6266
PB John Wiley & Sons, Inc.
DT Journal
LA English
CC 35-8 (Chemistry of Synthetic High Polymers)
AB Inorg.-organic hybrid polymers were developed and tested for evaluation in

optical and elec. applications. Although hybrid inorg.-organic polymers can be synthesized by sol-gel chemical at first, the phys. properties of hybrid inorg.-organic polymers are changed during thin film-making processes, i.e., photocuring and thermal curing. To study the effect of photoinitiator on the material properties during processing, the model system Diphenylsilanediol-3-(trimethoxysilyl)propyl methacrylate copolymer was selected. The conversion of C=C double bond of methacrylic groups depending on some kinds of photoinitiator quantities was characterized by Fourier transform IR spectroscopy. It was confirmed to correlate the degree of C=C double bond conversion with the refractive indexes. Thermodynamically, the enthalpy of the photopolymn. of hybrid polymer was studied by UV-DSC. UV-DSC spectra showed the exothermic nature of photopolymn. of ORMOCER I to be in dependence of photoinitiator quantities.

ST photoinitiator effect crosslinking diphenylsilanediol trimethoxysilyl propyl methacrylate copolymer

IT Hybrid organic-inorganic materials
Polymerization enthalpy
Refractive index
(effect of photoinitiator on photo-crosslinking of diphenylsilanediol-(trimethoxysilyl)propyl methacrylate copolymer)

IT Polysiloxanes, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(effect of photoinitiator on photo-crosslinking of diphenylsilanediol-(trimethoxysilyl)propyl methacrylate copolymer)

IT Crosslinking catalysts
(photochem., radical; effect of photoinitiator on photo-crosslinking of diphenylsilanediol-(trimethoxysilyl)propyl methacrylate copolymer)

IT Crosslinking
(photochem.; effect of photoinitiator on photo-crosslinking of diphenylsilanediol-(trimethoxysilyl)propyl methacrylate copolymer)

IT **320717-36-0P**, Diphenylsilanediol-3-(trimethoxysilyl)propyl methacrylate copolymer
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(Ormocer I, crosslinked; effect of photoinitiator on photo-crosslinking of diphenylsilanediol-(trimethoxysilyl)propyl methacrylate copolymer)

IT 24650-42-8, 2,2-Dimethoxy-2-phenylacetophenone 119313-12-1, Irgacure 369
RL: CAT (Catalyst use); USES (Uses)
(effect of photoinitiator on photo-crosslinking of diphenylsilanediol-(trimethoxysilyl)propyl methacrylate copolymer)

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Bellamy, L; The Infra-Red Spectra of Complex Molecules; Chapter 20 1975
(2) Buestrich, R; J Sol-Gel Sci Technol 2001, V20, P181 CAPLUS
(3) Chang, C; Handbook of Coatings Additives 1992, V2, P82
(4) Dominguez, C; Vacuum 1999, V52, P395 CAPLUS
(5) Houbertz, R; Appl Phys Lett 2004, V84, P1105 CAPLUS
(6) Lin-Vien, D; The Handbook of Infrared and Raman Characteristic Frequencies of Organic Molecules 1991
(7) Muellen, K; Electronic Materials:The Oligomer Approach; Chapter 5 1998
(8) Odian, G; Principles of Polymerization 1981
(9) Odian, G; Principles of Polymerization; Chapter 3 1981
(10) Popall, M; Mater Res Soc Symp Proc 2000, V628, P1018
(11) Popall, M; Mol Cryst Liq Cryst 2000, V354, P123 CAPLUS
(12) Roffey, C; Photogeneration of Reactive Species for UV Curing 1997
(13) Walton, D; Polymers 2000
(14) Wayne, C; Photochemistry; Chapter 2 2000

L6 ANSWER 4 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:127300 CAPLUS

DN 140:322283
ED Entered STN: 17 Feb 2004
TI Impact of photoinitiators on the photopolymerization and the optical properties of inorganic-organic hybrid polymers
AU Houbertz, R.; Domann, G.; Schulz, J.; Olsowski, B.; Frohlich, L.; Kim, W.-S.
CS Fraunhofer Institute for Silicate Research ISC, Wurzburg, 97082, Germany
SO Applied Physics Letters (2004), 84(7), 1105-1107
CODEN: APPLAB; ISSN: 0003-6951
PB American Institute of Physics
DT Journal
LA English
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 73
AB Sol-gel synthesis allows one to produce inorg.-organic hybrid polymer materials which can be functionalized in order to tailor their phys. and chemical properties. Besides, the resulting material properties are significantly influenced by further technol. processing of the materials in thin film technol., i.e., the photochem. and thermal curing of the materials. In order to investigate the relationship between technol. processing and material properties, a model system containing methacrylic groups as organically polymerizable units is chosen. The degree of conversion of the C:C double bond of the methacrylic group in dependence of the UV initiator concentration upon processing is characterized using Fourier-transform IR spectroscopy. The data are correlated to measurements of the refractive indexes at selected wavelengths.
ST hybrid polymer photoinitiator photopolymn refractive index sol gel
IT Refractive index
(impact of photoinitiators on photopolymn. and optical properties of inorg.-organic hybrid polymers)
IT Polysiloxanes, properties
RL: PRP (Properties)
(impact of photoinitiators on photopolymn. and optical properties of inorg.-organic hybrid polymers)
IT Crosslinking
(photochem.; impact of photoinitiators on photopolymn. and optical properties of inorg.-organic hybrid polymers)
IT Hybrid organic-inorganic materials
Simulation and Modeling, physicochemical
Sol-gel processing
(photopolymn. and optical properties of inorg.-organic hybrid polymers)
IT Polymerization catalysts
(photopolymn.; impact of photoinitiators on photopolymn. and optical properties of inorg.-organic hybrid polymers)
IT Glass, uses
RL: DEV (Device component use); USES (Uses)
(substrate; photopolymn. and optical properties of inorg.-organic hybrid polymers)
IT **320717-36-0**, Diphenylsilanediol-3-methacryloyloxypropyl trimethoxysilane copolymer **320717-37-1**
RL: PRP (Properties)
(impact of photoinitiators on photopolymn. and optical properties of inorg.-organic hybrid polymers)
IT 260062-07-5, Si100
RL: DEV (Device component use); USES (Uses)
(p-doped, wafers, substrate; photopolymn. and optical properties of inorg.-organic hybrid polymers)
IT 119313-12-1, Irgacure 369
RL: CAT (Catalyst use); USES (Uses)
(polymerization catalyst, photo; photopolymn. and optical properties of

inorg.-organic hybrid polymers)
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Brauer, A; MRS Bull 2001, V26, P519
(2) Buestrich, R; J Sol-Gel Sci Technol 2001, V20, P181 CAPLUS
(3) Chang, C; Handbook of Coatings Additives 1992, V2, P7
(4) Frohlich, L; Mater Res Soc Symp Proc 2002, V726, P349 CAPLUS
(5) Houbertz, R; Mater Res Soc Symp Proc 2002, V665, P321 CAPLUS
(6) Houbertz, R; Unpublished
(7) Lin-Vien, D; The Handbook of Infrared and Raman Characteristic Frequencies of Organic Molecules 1991
(8) Odian, G; Principles of Polymerization 1981
(9) Popall, M; ELMAT Conference Proceedings 1991, P1
(10) Popall, M; IEEE Electron Comp Technol Conf 1998, P1018 CAPLUS
(11) Popall, M; Mater Res Soc Symp Proc 2000, V628, PCC9
(12) Roffey, C; Photogeneration of Rective Species for UV Curing 1997, P161
(13) Streppel, U; Opt Mater (Amsterdam, Neth) 2002, V21, P479

L6 ANSWER 5 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:83917 CAPLUS
DN 141:285479
ED Entered STN: 02 Feb 2004
TI Inorganic-organic hybrid polymers for information technology: from planar technology to 3-D nanostructures for application in photonic devices
AU Houbertz, R.; Domann, G.; Popall, M.; Serbin, J.; Ovsianikov, A.; Chichkov, B. N.; Streppel, U.; Dannberg, P.; Braeuer, A.
CS Fraunhofer ISC, Wuerzburg, 97082, Germany
SO VDI-Berichte (2003), 1803(Nanofair 2003: New Ideas for Industry, 2003), 121-124
CODEN: VDIBAP; ISSN: 0083-5560
PB VDI Verlag GmbH
DT Journal
LA English
CC 73-12 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 38
AB Inorg.-organic hybrid polymers which are suitable for optical applications, were synthesized by hydrolysis/polycondensation reactions. The material can be processed by conventional photolithog. as well as by two-photon processes using femtosecond laser pulses. The material will be briefly described and examples for 2- and 3-D lithog. will be given, with particular emphasis on optical applications.
ST inorg org hybrid polymer information technol; planar technol 3D nanostructure application photonic device
IT Ceramers
Lithography
Nanostructures
Photonics
(inorg.-organic hybrid polymers for information technol. and from planar technol. to 3-D nanostructures for application in photonic devices)
IT Polymers, properties
Polymers, properties
RL: CPS (Chemical process); DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(inorg.-organic hybrid polymers for information technol. and from planar technol. to 3-D nanostructures for application in photonic devices)
IT **320717-36-0**
RL: CPS (Chemical process); DEV (Device component use); PEP (Physical,

engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(inorg.-organic hybrid polymers for information technol. and from planar technol. to 3-D nanostructures for application in photonic devices)
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Buestrich, R; J Sol-Gel Sci Technol 2001, V20, P181 CAPLUS
(2) Cumpston, B; Nature 1999, V398, P51 CAPLUS
(3) Frohlich, L; Mat Res Soc Symp 2002, V726, P349 CAPLUS
(4) Houbertz, R; Mat Res Soc Symp 2001, V665, P321
(5) Kawata, S; Nature 2001, V412, P697 CAPLUS
(6) Serbin, J; Opt Lett 2003, V28, P301 CAPLUS
(7) Serbin, J; Unpublished
(8) Streppel, U; Appl Opt 2003, V42, P3570 CAPLUS
(9) Streppel, U; Opt Mat 2002, V21, P475

L6 ANSWER 6 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:822167 CAPLUS
DN 140:33581
ED Entered STN: 20 Oct 2003
TI Inorganic-organic hybrid materials for real 3-D sub-μm lithography
AU Houbertz, R.; Schulz, J.; Froehlich, L.; Domann, G.; Popall, M.; Serbin, J.; Chichkov, B.
CS Fraunhofer Institute for Silicate Research ISC, Wuerzburg, D-97082, Germany
SO Materials Research Society Symposium Proceedings (2003), 780(Advanced Optical Processing of Materials), 175-180
CODEN: MRSPDH; ISSN: 0272-9172
PB Materials Research Society
DT Journal
LA English
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
AB Real 3-D sub-μm lithog. was performed with two-photon polymerization (2PP) using inorg.-organic hybrid polymer (ORMOCER) resins. The hybrid polymers were synthesized by hydrolysis/polycondensation reactions (modified sol-gel synthesis) which allows one to tailor their material properties towards the resp. applications, i.e., dielecs., optics or passivation. Due to their photosensitive organic functionalities, ORMOCERs can be patterned by conventional photolithog. as well as by femtosecond laser pulses at 780 nm. This results in polymerized (solid) structures where the non-polymerized parts can be removed by conventional developers. ORMOCER structures as small as 200 nm or even below were generated by 2PP of the resins using femtosecond laser pulses. It is demonstrated that ORMOCERs have the potential to be used in components or devices built up by nm-scale structures such as, e.g., photonic crystals. Aspects of the materials in conjunction to the applied technol. are discussed.
ST photolithog 3D fabrication two photon polymn Ormocer resin; inorg org hybrid polymer Ormocer resin 3D photolithog
IT Micromachining
(lithog.; real 3-D photolithog. with two-photon polymerization using inorg.-organic hybrid polymer Ormocer resin in relation to)
IT Polymerization
(photopolymn., two-photon; real 3-D photolithog. with two-photon polymerization using inorg.-organic hybrid polymer Ormocer resin)
IT Ceramers
Photoresists
(real 3-D photolithog. with two-photon polymerization using inorg.-organic hybrid

polymer Ormocer resin)
IT Silsesquioxanes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(real 3-D photolithog. with two-photon polymerization using inorg.-organic hybrid
polymer Ormocer resin)
IT Stereolithography
(real 3-D photolithog. with two-photon polymerization using inorg.-organic hybrid
polymer Ormocer resin in relation to)
IT 119313-12-1, Irgacure 369
RL: CAT (Catalyst use); USES (Uses)
(real 3-D photolithog. with two-photon polymerization using inorg.-organic hybrid
polymer Ormocer resin)
IT **320717-36-0**, Diphenylsilanediol-(3-methacryloyloxypropyl)trimethoxysilane copolymer
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(real 3-D photolithog. with two-photon polymerization using inorg.-organic hybrid
polymer Ormocer resin)
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Brauer, A; MRS Bull 2001, V26, P519
(2) Buestrich, R; J Sol-Gel Sci Technol 2001, V20, P181 CAPLUS
(3) Chang, C; Handbook of Coatings Additives 1992, V2, P7
(4) Cumpston, B; Nature 1999, V398, P51 CAPLUS
(5) Frohlich, L; Mater Res Soc Symp Proc 2002, V726, P349 CAPLUS
(6) Houbertz, R; Appl Phys Lett (submitted)
(7) Houbertz, R; Proc on the 4th Intern Conf on Coatings on Glass 2002, P605
(8) Kawata, S; Nature 2001, V412, P697 CAPLUS
(9) Maruo, S; Opt Lett 1997, V22, P132 CAPLUS
(10) Robertsson, M; ECTC Electronic Components and Technology Conference 1998, P1413 CAPLUS
(11) Serbin, J; Opt Lett 2003, V28, P301 CAPLUS
(12) Streppel, U; Opt Mater 2002, V21, P475
(13) Streppel, U; Proc POLYTRONIC 2001, P329
(14) Sun, H; Opt Lett 2000, V25, P1110 CAPLUS

L6 ANSWER 7 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:773257 CAPLUS
DN 140:375861
ED Entered STN: 03 Oct 2003
TI Inorganic-organic hybrid polymers for information technology: from planar technology to 3D nanostructures
AU Houbertz, Ruth; Froehlich, Lothar; Popall, Michael; Streppel, Ulrich; Dannberg, Peter; Braeuer, Andreas; Serbin, J.; Chichkov, B. N.
CS Fraunhofer Institute for Silicate Research ISC, Wuerzburg, 97082, Germany
SO Advanced Engineering Materials (2003), 5(8), 551-555
CODEN: AENMFY; ISSN: 1438-1656
PB Wiley-VCH Verlag GmbH & Co. KGaA
DT Journal
LA English
CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 76
AB Sol-gel synthesis allows inorg.-organic hybrid polymer materials (ORMOCERs)

to be produced, which can be functionalized to tailor their phys. and chemical properties such as refractive index or optical loss. A particular material system is discussed here, which is synthesized without addition of water and is applied in optical communications. As examples for 2D and 2.5D technol., planar waveguides, stacked waveguides, and microlenses are shown. Using two-photon polymerization initiated by femtosecond laser pulses, arbitrary 3D structures can be made in the submicrometer range. In particular, 3D photonic crystal structures are described and discussed.

ST inorg org hybrid polymer information technol planar nanostructures ORMOCER

IT Ceramers
Electroluminescent devices
Hybrid organic-inorganic materials
Information systems
Microlenses
Nanostructures
Optical communication
Photonic crystals
Planar waveguides (optical)
(planar technol. to 3D nanostructure of inorg.-organic hybrid polymers for information technol.)

IT Sol-gel processing
(polymerization; planar technol. to 3D nanostructure of inorg.-organic hybrid polymers for information technol.)

IT Polymerization
(sol-gel; planar technol. to 3D nanostructure of inorg.-organic hybrid polymers for information technol.)

IT 119313-12-1, Irgacure 369
RL: CAT (Catalyst use); USES (Uses)
(planar technol. to 3D nanostructure of inorg.-organic hybrid polymers for information technol.)

IT **320717-36-0**, Diphenylsilanediol-3-methacryloxypropyltrimethoxysilane copolymer
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(planar technol. to 3D nanostructure of inorg.-organic hybrid polymers for information technol.)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Brauer, A; MRS Bull 2001, V26, P519
(2) Buestrich, R; J Sol-Gel Sci Technol 2001, V20, P181 CAPLUS
(3) Frohlich, L; Mater Res Soc Symp Proc 2002, V726, P349 CAPLUS
(4) Frohlich, L; Proc Materials Week, http://www.materialsweek.org/proceedings/2002
(5) Haas, K; Adv Eng Mater 2000, V2, P571 CAPLUS
(6) Houbertz, R; Mater Res Soc Symp 2003, V769, PH7.4
(7) Houbertz, R; Mater Res Soc Symp Proc 2001, V665, P321
(8) Houbertz, R; Thin Solid Films in press
(9) Houbertz, R; Unpublished
(10) Kawata, S; Nature 2001, V412, P697 CAPLUS
(11) Maruo, S; Opt Lett 1997, V22, P132 CAPLUS
(12) Popall, M; ELMAT Conf Proc 1991, P1
(13) Popall, M; Mater Res Soc Symp Proc 2000, V621, PCC9.4.1
(14) Rousseau, A; Proc Plastic Optical Fibrers Conf (Paris) 1992, P33
(15) Serbin, J; Opt Lett 2003, V28, P301 CAPLUS
(16) Streppel, U; Opt Mater 2002, V21, P475

L6 ANSWER 8 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:742096 CAPLUS
DN 140:42889

STN search for 10/030910

ED Entered STN: 22 Sep 2003
TI Inorganic-organic hybrid materials for application in optical devices
AU Houbertz, R.; Domann, G.; Cronauer, C.; Schmitt, A.; Martin, H.; Park, J.-U.; Frohlich, L.; Buestrich, R.; Popall, M.; Streppel, U.; Dannberg, P.; Wachter, C.; Brauer, A.
CS Fraunhofer Institute for Silicate Research ISC, Wurzburg, 97082, Germany
SO Thin Solid Films (2003), 442(1,2), 194-200
CODEN: THSFAP; ISSN: 0040-6090
PB Elsevier Science B.V.
DT Journal
LA English
CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 73, 76
AB Integrated passive and active optical devices are the key components in current and future data transfer technologies. To fulfill future requirements in miniaturization for diffractive, refractive and integrated optical devices, new materials with higher thermal stability and a better compatibility to processing techniques used in conventional semiconductor devices production are needed. Inorg.-organic hybrid polymers (ORMOCERs) produced at fairly low costs with a high degree of reproducibility are now proven candidates. The materials can be functionalized such that their phys. and chemical properties can be tailored towards, e.g. optical applications on wafer-scale such as waveguides, gratings, or microoptical devices. The materials behave as a neg. resist and can thus be patterned by UV exposure with good resolution The materials are very well suited for thin and thick film packaging technol. The optical behavior is characterized and discussed with respect to the chemical functionalities. Addnl., some application examples of selected optical components are given, produced either by UV lithog. or by replication technol.
ST ceramer functionalized optical application
IT Ceramers
Hybrid organic-inorganic materials
Microlenses
Optical waveguides
(photocurable siloxane-silicates for application in optical devices)
IT Communication
(telecommunication, devices; photocurable siloxane-silicates for application in optical devices)
IT **320717-36-0 320717-37-1**
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(photocurable siloxane-silicates for application in optical devices)
RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Andrews, R; J Polym Sci B 1965, V3, P655 CAPLUS
(2) Brauer, A; MRS Bull 2001, V26, P519
(3) Brunet, F; J Non-Cryst Solids 1998, V231, P58 CAPLUS
(4) Buestrich, R; J Sol-Gel Sci Technol 2001, V20, P181 CAPLUS
(5) Buestrich, R; Mater Res Soc Symp Proc 2000, V628, PCC981
(6) Park, J; Private communication
(7) Popall, M; Mater Res Soc Symp Proc 2000, V628, PCC941
(8) Popall, M; Mol Cryst Liq Cryst 2000, V354, P123 CAPLUS
(9) Rankin, S; Chem Mater 1998, V44, P1143
(10) Robertsson, M; ECTC Electronic Components and Technology Conference 1998, P1413 CAPLUS
(11) Roscher, C; Mater Res Soc Symp Proc 1998, V519, P239 CAPLUS
(12) Schneider, H; Mater Res Soc Symp Proc 1992, V244, P337 CAPLUS
(13) Streppel, U; Opt Mater 2002, V21, P475
(14) Streppel, U; Proc Polytronic 2001, V21, P329
(15) Streppel, U; SPIE 2001, V4453, P61
(16) Teyssier, C; Lasers Optronics 1990, V9(12), P50

L6 ANSWER 9 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:673968 CAPLUS
DN 139:181671
ED Entered STN: 28 Aug 2003
TI Resin compositions for formation of UV-shielding layers and their laminates
IN Noda, Nobuhisa; Shimizu, Kenji; Okada, Yuki
PA Nippon Shokubai Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C09D143-04
ICS B32B007-02; B32B027-00; B32B027-30; C08F220-16; C08F220-30; C08F220-34; C08F220-36; C08F220-60; C08F230-08; C08F290-06; C09D005-32; C09D157-06; C09D183-04
CC 42-10 (Coatings, Inks, and Related Products)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003238887	A2	20030827	JP 2002-40714	20020218
PRAI JP 2002-40714		20020218		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003238887	ICM	C09D143-04
	ICS	B32B007-02; B32B027-00; B32B027-30; C08F220-16; C08F220-30; C08F220-34; C08F220-36; C08F220-60; C08F230-08; C08F290-06; C09D005-32; C09D157-06; C09D183-04

AB Title compns., with good balance in curability and pot life, contain polymers prepared from monomer mixts. containing reactive silyl-terminated polysiloxane-containing monomers, UV-absorbing group-contg monomers, and C≥6 alkyl-containing monomers. A solution containing Bu acrylate-cyclohexyl methacrylate-2-ethylhexyl acrylate-Me methacrylate-3-methacryloxypropyltrimethoxysilane-dimethyldimethoxysilane-tetramethoxysilane-RUVA 93 copolymer showed no gelation at 40° and 90% relative humidity over 30 days and was mixed with N-(2-aminoethyl)-3-aminopropylmethyldimethoxysilane, coated on a PET film, and dried at 80° for 1 h to form a cured coating showing good UV-shielding ability with 85% retention after 60 cycles of irradiating with 100-mW/cm2 UV at 70° and 70% relative humidity (RH) for 6 h and idling at 50° and 90% RH for 6 h per cycle.
ST UV shielding durability acrylic polysiloxane coating; pot life acrylic polysiloxane coating
IT Coating materials
(UV-absorbing; acrylic polysiloxane compns. with long pot life for curable coatings with durable UV-shielding ability)
IT UV shields
(acrylic polysiloxane compns. with long pot life for curable coatings with durable UV-shielding ability)
IT Polysiloxanes, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic; acrylic polysiloxane compns. with long pot life for curable coatings with durable UV-shielding ability)
IT Polyesters, miscellaneous
RL: MSC (Miscellaneous)
(base film; acrylic polysiloxane compns. with long pot life for curable

coatings with durable UV-shielding ability)
IT Polycarbonates, miscellaneous
RL: MSC (Miscellaneous)
(base sheets; acrylic polysiloxane compns. with long pot life for curable coatings with durable UV-shielding ability)
IT 581771-96-2P, N-(2-Aminoethyl)-3-aminopropylmethyldimethoxysilane-butyl acrylate-cyclohexyl methacrylate-2-ethylhexyl acrylate-methyl methacrylate-3-methacryloxypropyltrimethoxysilane-dimethyldimethoxysilane-tetramethoxysilane-RUVA 93 copolymer 581771-97-3P, N-(2-Aminoethyl)-3-aminopropylmethyldimethoxysilane-butyl acrylate-cyclohexyl methacrylate-2-ethylhexyl acrylate-methyl methacrylate-3-methacryloxypropyltrimethoxysilane-dimethyldimethoxysilane-tetramethoxysilane-ADK Stab LA 82-RUVA 93 copolymer **581771-98-4P**, N-(2-Aminoethyl)-3-aminopropylmethyldimethoxysilane-butyl acrylate-cyclohexyl methacrylate-2-ethylhexyl acrylate-methyl methacrylate-3-methacryloxypropyltrimethoxysilane-dimethyldimethoxysilane-tetramethoxysilane-2,4-diphenyl-6-[2-hydroxy-4-(2-acryloyloxyethoxy)]-s-triazine-ADK Stab LA 82-RUVA 93 copolymer **581771-99-5P**, N-(2-Aminoethyl)-3-aminopropylmethyldimethoxysilane-butyl acrylate-cyclohexyl methacrylate-2-ethylhexyl acrylate-methyl methacrylate-3-methacryloxypropyltrimethoxysilane-dimethyldimethoxysilane-tetramethoxysilane-2,4-diphenyl-6-[2-hydroxy-4-(2-acryloyloxyethoxy)]-s-triazine-2-hydroxy-4-(acryloyloxyethoxy)benzophenone-ADK Stab LA 82 copolymer 581772-00-1P 581772-01-2P 581772-02-3P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic polysiloxane compns. with long pot life for curable coatings with durable UV-shielding ability)
IT 25038-59-9, Lumirror T, miscellaneous
RL: MSC (Miscellaneous)
(base film; acrylic polysiloxane compns. with long pot life for curable coatings with durable UV-shielding ability)
IT 24936-68-3, Lexan 9034, miscellaneous
RL: MSC (Miscellaneous)
(base sheet; acrylic polysiloxane compns. with long pot life for curable coatings with durable UV-shielding ability)

L6 ANSWER 10 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:356338 CAPLUS
DN 138:354862
ED Entered STN: 09 May 2003
TI Production of three-dimensional objects or surfaces from polysiloxanes by laser radiation
IN Houbertz-Krauss, Ruth; Schulz, Jochen; Froehlich, Lothar; Popall, Michael; Chichkov, Boris; Serbin, Jesper
PA Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung e.V., Germany; Laser Zentrum Hannover e.V.
SO PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM B29C067-00
ICS G03F007-00; C08J003-28
CC 38-2 (Plastics Fabrication and Uses)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003037606	A1	20030508	WO 2002-EP11690	20021018
	W: US				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT,				

LU, MC, NL, PT, SE, SK, TR
DE 10152878 A1 20030515 DE 2001-10152878 20011026
PRAI DE 2001-10152878 A 20011026
CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003037606	ICM	B29C067-00
	ICS	G03F007-00; C08J003-28
DE 10152878	ECLA	B29C067/00L; C08G077/20; G03F007/00S; G03F007/075M

AB In the title process, useful in manufacture of optical, (di)elec., magnetic, mech., biol./biochem., or medical materials (no data), liquid or pasty organic polysiloxane-containing materials are subjected to laser-induced, multiphoton polymerization A 1:1 Ph2(OH)2-3-(trimethoxysilyl)propyl methacrylate condensate
[prepared in the presence of Ba(OH)2] was subjected to laser irradiation in an illustrated apparatus to give a solid body with a textured surface.

ST molding polysiloxane laser induced; methacrylate polysiloxane molding laser; polymn multiphoton polysiloxane molding; surface structuring polymn laser; metal alkoxide polysiloxane molding laser

IT Alcohols, uses
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(C1-8, metal salts; production of three-dimensional objects or surfaces from polysiloxanes containing metal alkoxides by laser radiation)

IT Group IIB elements
Group IIIA elements
Group IIIB elements
Group IVB elements
Group VB elements
Group VIB elements
Group VIIB elements
Group VIII elements
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(alkoxides; production of three-dimensional objects or surfaces from polysiloxanes containing metal alkoxides by laser radiation)

IT Optical materials
(diffractive; production of diffractive optical materials from polysiloxanes by laser radiation)

IT Medical goods
(implants; production of medical implants from polysiloxanes by laser radiation)

IT Molding of plastics and rubbers
(laser-induced; production of three-dimensional objects or surfaces from polysiloxanes by laser radiation)

IT Polymerization
(multiphoton, laser-induced; production of three-dimensional objects or surfaces from polysiloxanes by laser radiation)

IT Microarray technology
(production of biochips from polysiloxanes by laser radiation)

IT Electric insulators
(production of dielec. materials from polysiloxanes by laser radiation)

IT Gas sensors
(production of gas sensors from polysiloxanes by laser radiation)

IT Optical filters
(production of light filters from polysiloxanes by laser radiation)

IT Magnetic materials
(production of magnetic materials from polysiloxanes by laser radiation)

IT Photomasks (lithographic masks)
(production of masks from polysiloxanes by laser radiation)
IT Photonic crystals
(production of photonic crystals from polysiloxanes by laser radiation)
IT Laser radiation
(production of three-dimensional objects or surfaces from polysiloxanes by laser radiation)
IT Polysiloxanes, uses
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(production of three-dimensional objects or surfaces from polysiloxanes by laser radiation)
IT **320717-36-0**, Diphenylsilanediol-3-(trimethoxysilyl)propyl methacrylate copolymer
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(production of three-dimensional objects or surfaces from polysiloxanes by laser radiation)
IT 7440-56-4D, Germanium, alkoxides
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(production of three-dimensional objects or surfaces from polysiloxanes containing metal alkoxides by laser radiation)
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Crivello; US 5639413 A 1997 CAPLUS
(2) Osaka; JP 02111530 A 1990
(3) Popall; US 5734000 A 1998 CAPLUS
(4) Popall; WO 9325604 D 1998 CAPLUS
(5) Siemens; DE 4126759 A 1993 CAPLUS
(6) Takemoto; JP 09141748 A CAPLUS
(7) Wolf; US 5461088 A 1995 CAPLUS

L6 ANSWER 11 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:354338 CAPLUS
DN 135:108229
ED Entered STN: 17 May 2001
TI Low Si-OH ORMOCERs for dielectrical and optical interconnection technology
AU Buestrich, Ralf; Kahlenberg, Frank; Popall, Michael; Martin, Adelheid; Rosch, Oliver
CS Fraunhofer-Institut fur Silicatforschung, Wurzburg, D-97082, Germany
SO Materials Research Society Symposium Proceedings (2001), 628(Organic/Inorganic Hybrid Materials), CC9.8.1-CC9.8.6
CODEN: MRSPDH; ISSN: 0272-9172
PB Materials Research Society
DT Journal
LA English
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
AB ORMOCERs (inorg.-organic hybrid polymers) with low Si-OH content were synthesized by a new sol-gel route. Optimization of the sol-gel process parameters (catalyst, temperature etc.) was performed in order to achieve reproducible low cost materials which are photopatternable even in higher layer thicknesses up to 150 μm within one step without cracking or delamination. The materials combine low losses in the NIR region (0.2 dB/cm at 1310 nm and 0.5 dB/cm at 1550 nm without fluorination!) with low dielec. consts. (3.3 at 10 kHz). Beside the dielec. and optical

properties the materials have a variety of addnl. advantages for interconnection technol.: good wetting and adhesion on various substrates (e.g. glass, silicon and several polymers), low processing temps. (postbake below 160°C), high thermal stability (up to 270°C) and a tunable refractive index. Details of chemical synthesis and characterization as well as photo-lithog. processing of ORMOCER materials are presented.

ST low k material ORMOCER dielec optical interconnection technol; ceramer low silanol low k material interconnection technol

IT Ceramers
(ORMOCERs; low Si-OH ORMOCERs for dielec. and optical interconnection technol.)

IT Dielectric constant
Electric insulators
Interconnections (electric)
Photoresists
Sol-gel processing
(low Si-OH ORMOCERs for dielec. and optical interconnection technol.)

IT Silsesquioxanes
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(silica-containing; low Si-OH ORMOCERs for dielec. and optical interconnection technol.)

IT 156645-07-7P, Diphenylsilanediol-3-glycidoxypropyltrimethoxysilane copolymer **320717-36-0P 320717-37-1P**, Diphenylsilanediol-γ-methacryloxypropyltrimethoxysilane-3,3,3-trifluoropropyltrimethoxysilane copolymer 349607-64-3P 349607-65-4P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(low Si-OH ORMOCERs for dielec. and optical interconnection technol.)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Brunet, F; J Non-Cryst Solids 1998, V231, P58 CAPLUS
(2) Buestrich, R; J Sol-Gel Sci Technol, (to be published) 2000
(3) Buestrich, R; Proc EUROMAT '99 1999, V13
(4) Del Monte, F; J Sol-Gel Sci Technol 1999, P73 CAPLUS
(5) Hoebbel, D; J Sol-Gel Sci Technol 1996, V7, P217 CAPLUS
(6) Popall, M; Proc 48th Electronic Components and Technology Conference 1998, P1018 CAPLUS
(7) Rosch, O; Proc 44th SPIE-meeting 1999, V3799, P214
(8) Rosch, O; Proc Polymer Optical Fibres and Applications Conference (POF) 1998, P332
(9) Seddon, A; Critical Rew Conf Sol-Gel and Polymer Photonic Devices Proc 1997, P143 CAPLUS
(10) Wipfelder, E; Angew Makromol Chem 1994, V218, P111 CAPLUS

L6 ANSWER 12 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:327679 CAPLUS
DN 135:93246
ED Entered STN: 09 May 2001
TI ORMOCERs for optical interconnection technology
AU Buestrich, R.; Kahlenberg, F.; Popall, M.; Dannberg, P.; Muller-Fiedler, R.; Rosch, O.
CS Fraunhofer Institut fur Silicatforschung, Wurzburg, Germany
SO Journal of Sol-Gel Science and Technology (2001), 20(2), 181-186
CODEN: JSGTEC; ISSN: 0928-0707
PB Kluwer Academic Publishers
DT Journal
LA English
CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 57, 73

AB New inorg.-organic hybrid polymers (ORMOCERs) for integrated optical and

opto-electronic devices were synthesized by sol-gel processing of functionalized alkoxysilanes. Process parameters (catalyst, temperature etc.) were optimized to achieve highly reproducible low cost materials which are photo-patternable even in higher layer thickness (presently 100 μm within one step). The resulting materials have low optical losses at the most important wavelengths for telecommunications in the NIR range (0.3 dB/cm at 1320 nm, 0.6 dB/cm at 1550 nm) and a variety of addnl. advantageous properties for optical interconnection technol. and production of opto-electronic devices: good wetting and adhesion on various substrates (e.g. glass, silicon and several polymers), low processing temps. (post-bake at 150°) and high thermal stability (decomposition at 270°) compared to alternative opto-polymers for NIR applications. A further advantage is a tunable refractive index, which can be achieved by mixing different resins.

ST hybrid diphenylsilanediol methacryloxypropyltrimethoxysilane copolymer sol gel; optical device telecommunication waveguide polysiloxane hybrid

IT Ceramers
Hybrid organic-inorganic materials
Optical switches
(ORMOCERs for optical interconnection technol.)

IT Polysiloxanes, preparation
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(in preparation of ORMOCERs for optical interconnection technol.)

IT Refractive index
(of ORMOCERs for optical interconnection technol.)

IT Communication
Sol-gel processing
Waveguides
(preparation of ORMOCERs for optical interconnection technol.)

IT **320717-36-0P**, Diphenylsilanediol-3-methacryloyloxypropyltrimethoxy silane copolymer **320717-37-1P**
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(ORMOCER; ORMOCERs for optical interconnection technol.)

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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(2) Brunet, F; J Non-Cryst Solids 1998, V231, P58 CAPLUS
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(6) Hoebbel, D; J Sol-Gel Sci Tech 1996, V7, P217 CAPLUS
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(8) Najafi, S; Journal of Lightwave Technology 1998, V16(9), P1640 CAPLUS
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(10) Rankin, S; Chem Mater 1998, V44, P1143
(11) Rosch, O; Proc Polymer Optical Fibres and Applications Conference 1998, P332
(12) Rosch, O; SPIE 1999
(13) Seddon, A; Conf Sol-Gel and Polymer Photonic Devices Proc 1997, VCR68, P143 CAPLUS
(14) Silberberg, Y; Appl Phys Lett 1987, V51(16), P1230 CAPLUS
(15) Watanabe, T; IEEE Jornal of Lightwave Technology 1998, V6, P1049
(16) Wipfelder, E; Chemie 1994, V218, P111 CAPLUS
(17) Yardley, J; Proc Optoelectronic Interconnects and Packaging 4th 1997, P155 CAPLUS

L6 ANSWER 13 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:50708 CAPLUS

STN search for 10/030910

DN 134:116361
ED Entered STN: 19 Jan 2001
TI Organically modified silicic acid polycondensates, their manufacture and use as negative resists
IN Roscher, Christof; Buestrich, Ralf
PA Fraunhofer-Gesellschaft zur Forderung der Angewandten Forschung e.V., Germany
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM C08G077-06
ICS C08G077-14
CC 35-6 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 74
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001004186	A1	20010118	WO 2000-DE1833	20000531
	W: CA, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	DE 19932629	A1	20010118	DE 1999-19932629	19990713
	CA 2378756	AA	20010118	CA 2000-2378756	20000531
	EP 1196478	A1	20020417	EP 2000-947787	20000531
	EP 1196478	B1	20030813		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	AT 247144	E	20030815	AT 2000-947787	20000531
PRAI	DE 1999-19932629	A	19990713		
	WO 2000-DE1833	W	20000531		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001004186	ICM	C08G077-06
	ICS	C08G077-14

AB The organically modified, storage-stable, UV-curable, NIR-transmitting silicic acid polycondensates can be photostructured in layers having a thickness of 1-150 μm. The polycondensates can be obtained by condensing di-C6-20-arylsilanediols with RSi(OR')3 (I; R = C2-15 organic group containing ethylenic unsatn. or an epoxy group; R' = Me, Et) in equimolar ratio. Condensation occurs without the addition of water. Up to 90 mol% of I can be replaced by cocondensable compds. of B, Al, Si, Ge, Ti, and/or Zr.
ST photocurable polysiloxane resist
IT Polysiloxanes, preparation
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(UV-curable; organically modified silicic acid polycondensates for use as neg. resists)
IT Resists
(neg.-working; organically modified silicic acid polycondensates for use as neg. resists)
IT Alkaline earth hydroxides
RL: CAT (Catalyst use); USES (Uses)
(preparation of organically modified silicic acid polycondensates for use as neg. resists)
IT **320717-36-0P**, Diphenylsilanediol-(3-methacryloyloxypropyl)trimethoxysilane copolymer **320717-37-1P**, Diphenylsilanediol-(3-methacryloyloxypropyl)trimethoxysilane-trimethoxy(3,3,3-

trifluoropropyl)silane copolymer
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(organically modified silicic acid polycondensates for use as neg. resists)
IT 121-44-8, Triethylamine, uses 12125-01-8, Ammonium fluoride
RL: CAT (Catalyst use); USES (Uses)
(preparation of organically modified silicic acid polycondensates for use as neg. resists)
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Fraunhofer Gesellschaft; EP 0812894 A 1997 CAPLUS
(2) Fraunhofer Gesellschaft; DE 19613650 C 1997 CAPLUS

L6 ANSWER 14 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:815263 CAPLUS
DN 134:5980
ED Entered STN: 21 Nov 2000
TI Resin compositions for emulsion coating materials
IN Hatano, Takanori; Inoue, Shoji
PA Kanegafuchi Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C09D157-06
ICS C08F002-44; C08F008-00; C08F230-08; C08F283-12; C08L083-10; C09D143-04; C09D183-04
CC 42-10 (Coatings, Inks, and Related Products)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000319579	A2	20001121	JP 1999-129477	19990511
PRAI JP 1999-129477		19990511		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2000319579	ICM	C09D157-06
	ICS	C08F002-44; C08F008-00; C08F230-08; C08F283-12; C08L083-10; C09D143-04; C09D183-04

AB Coating materials contain vinyl polymers crosslinked with polysiloxanes having 15-55% Ph groups. Thus, an emulsion was prepared from a diphenyldimethoxysilane-octamethylcyclotetrasiloxane copolymer emulsion 160, γ-methacryloxypropyltrimethoxysilane 4.8, Me methacrylate 94.4, Bu acrylate 56, and acrylic acid 4.8 parts.
ST phenyl polysiloxane crosslinking vinyl polymer emulsion coating; radical emulsion polymn coating material
IT Polysiloxanes, uses
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(Ph; emulsion coating materials containing Ph polysiloxane-crosslinked vinyl polymers)
IT Coating materials
Crosslinking agents
Emulsions
(emulsion coating materials containing Ph polysiloxane-crosslinked vinyl polymers)
IT Polymerization
(emulsion, radical; emulsion coating materials containing Ph polysiloxane-crosslinked vinyl polymers)

IT Vinyl compounds, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymers; emulsion coating materials containing Ph polysiloxane-crosslinked vinyl polymers)

IT 27881-19-2P, Octamethylcyclotetrasiloxane-octaphenylcyclotetrasiloxane copolymer 239101-51-0P, Dimethoxydiphenylsilane-octamethylcyclotetrasiloxane copolymer 239101-52-1P, Dimethoxymethylphenylsilane-octamethylcyclotetrasiloxane copolymer 308241-86-3P, Dimethoxydiphenylsilane-methyltrimethoxysilane-octamethylcyclotetrasiloxane copolymer **308241-87-4P**, Dimethoxydiphenylsilane-γ-methacryloxypropyltrimethoxysilane-octamethylcyclotetrasiloxane copolymer **308241-88-5P**, Dimethoxydiphenylsilane-γ-methacryloxypropyltrimethoxysilane-methyltrimethoxysilane-octamethylcyclotetrasiloxane copolymer 308241-89-6P, Octamethylcyclotetrasiloxane-tetramethyltetraphenylcyclotetrasiloxane copolymer
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(emulsion coating materials containing Ph polysiloxane-crosslinked vinyl polymers)

IT 308241-90-9P 308241-91-0P 308241-92-1P 308241-93-2P 308241-94-3P 308241-95-4P 308241-96-5P 308241-97-6P 308241-98-7P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(emulsion coating materials containing Ph polysiloxane-crosslinked vinyl polymers)

L6 ANSWER 15 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:744575 CAPLUS
DN 134:87200
ED Entered STN: 22 Oct 2000
TI ORMOCERs for optical interconnection technology
AU Buestrich, R.; Kahlenberg, F.; Popall, M.; Dannberg, P.; Muller-Fiedler, R.; Rosch, O.
CS Fraunhofer Institut fur Silicatforchung, Wurzburg, Germany
SO EUROMAT 99, Biannual Meeting of the Federation of European Materials Societies (FEMS), Munich, Germany, Sept. 27-30, 1999 (2000), Meeting Date 1999, Volume 13, 323-329. Editor(s): Grassie, K. Publisher: Wiley-VCH Verlag GmbH, Weinheim, Germany.
CODEN: 69AMNI
DT Conference
LA English
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 37, 73
AB New inorg.-organic hybrid polymers (ORMOCERs) for integrated optical and optoelectronic devices were synthesized by sol-gel processing of functionalized alkoxysilanes. Process parameters (catalyst, temperature etc.) were optimized to achieve highly reproducible low cost materials which are photopatternable even in higher layer thickness (presently 100 μm within one step). The resulting materials have low optical losses at the most important wavelengths for telecommunication in the NIR range (0.2 dB/cm at 1310 nm, 0.5 dB/cm at 1550 nm) and a variety of addnl. advantageous properties for optical interconnection technol. and production of opto-electronic devices: good wetting and adhesion on various substrates (e.g. glass, silicon and several polymers), low processing temps. (postbake at 160 °C) and high thermal stability (decomposition at 270 °C) compared to alternative opto-polymers for NIR applications. A further advantage is a tunable refractive index, which can be achieved by mixing different resins.

STN search for 10/030910

ST ORMOCER polymer optical interconnection technol
IT Electronic properties
(optoelectronic; preparation and characterization of ORMOCERs for optical interconnection technol.)
IT Ceramers
Optical communication
Optical integrated circuits
Refractive index
Sol-gel processing
Thermal stability
(preparation and characterization of ORMOCERs for optical interconnection technol.)
IT **201404-82-2P**
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation and characterization of ORMOCERs for optical interconnection technol.)
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Brunet; J of Non-Cryst Solids 1998, V231, P58 CAPLUS
(2) Hoebbel, D; J of Sol-Gel Science and Techn 1996, V7, P217 CAPLUS
(3) Popall, M; Proc EC/TC 1998, P1018 CAPLUS
(4) Rankin, S; Chem Mater 1998, V44, P1143
(5) Rosch, O; Proc POF (POF) 1998, P332
(6) Rosch, O; SPIE 1999
(7) Wipfelder, E; Die Angewandte Makromolek Chemie 1994, V218, P111 CAPLUS

L6 ANSWER 16 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:672907 CAPLUS
DN 133:253306
ED Entered STN: 26 Sep 2000
TI Polysiloxane fireproofing agents and resin compositions containing them
IN Miyatake, Nobuo; Takigawa, Kazunori; Nakamori, Daisuke; Hamaguchi, Shigeki
PA Kanegafuchi Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08F283-12
ICS C08F002-44; C08L023-12; C08L023-16; C08L025-06; C08L025-12; C08L025-16; C08L027-06; C08L033-12; C08L051-08; C08L067-00; C08L069-00; C08L071-12; C08L077-00
CC 37-6 (Plastics Manufacture and Processing)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000264935	A2	20000926	JP 1999-69448	19990316
PRAI	JP 1999-69448		19990316		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2000264935	ICM	C08F283-12
	ICS	C08F002-44; C08L023-12; C08L023-16; C08L025-06; C08L025-12; C08L025-16; C08L027-06; C08L033-12; C08L051-08; C08L067-00; C08L069-00; C08L071-12; C08L077-00

AB The fireproofing agents are manufactured by grafting vinyl monomers onto polysiloxane particles with diameter 0.008-0.2 μm. Thus, octamethylcyclotetrasiloxane-γ-acryloyloxypropyltrimethoxysilane-diphenyldimethoxysilane copolymer (average particle size 0.06 μm) was

grafted with styrene and acrylonitrile, kneaded with Bu acrylate-styrene-acrylonitrile graft copolymer, acrylonitrile-styrene copolymer, and other additives, and injection-molded to give a test piece, showing Izod impact strength 22 kg-cm/cm and UL 94 fire resistance rating HB.

ST fireproofing agent vinyl graft polysiloxane; cyclotetrasiloxane acryloyloxypropyltrimethoxysilane dimethoxysilane styrene acrylonitrile graft fireproofing; impact resistance resin polysiloxane blend

IT Polysiloxanes, preparation
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); PREP (Preparation); USES (Uses)
(acrylic, graft, fireproofing agents; graft polysiloxane fireproofing agents)

IT Silicone rubber, uses
Silicone rubber, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(acrylic-, graft polymers with styrene, acrylonitrile, and phenylmaleimide; graft polysiloxane fireproofing agents)

IT Acrylic rubber
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(graft polymers with styrene, acrylonitrile, and phenylmaleimide; graft polysiloxane fireproofing agents)

IT Fireproofing agents
Impact-resistant materials
(graft polysiloxane fireproofing agents)

IT Polycarbonates, properties
Polymer blends
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(graft polysiloxane fireproofing agents)

IT Polyamides, uses
Polyesters, uses
Polyoxyphenylenes
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(graft polysiloxane fireproofing agents)

IT Acrylic rubber
Acrylic rubber
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(siloxane-, graft polymers with styrene, acrylonitrile, and phenylmaleimide; graft polysiloxane fireproofing agents)

IT **296240-26-1P**, Acrylonitrile-γ-acryloyloxypropyltrimethoxysilane-diphenyldimethoxysilane-octamethylcyclotetrasiloxane-styrene graft copolymer **296240-27-2P**, γ-Acryloyloxypropyltrimethoxysilane-diphenyldimethoxysilane-methyl methacrylate-octamethylcyclotetrasiloxane graft copolymer
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); PREP (Preparation); USES (Uses)
(fireproofing agent; graft polysiloxane fireproofing agents)

IT 9003-54-7P, Acrylonitrile-styrene copolymer 108554-70-7P, Acrylonitrile-butyl acrylate-styrene graft copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(graft polysiloxane fireproofing agents)

IT 98-83-9D, α-Methylstyrene, graft polymers with rubbers 941-69-5D, N-Phenylmaleimide, graft polymers with rubbers 9002-86-2, Poly(vinyl

chloride) 9003-07-0, Polypropylene 9003-53-6, Polystyrene 9011-14-7, Poly(methyl methacrylate) 25034-86-0, Methyl methacrylate-styrene copolymer 106677-58-1, Acrylonitrile-butadiene-styrene graft copolymer 108564-20-1, Acrylonitrile-butadiene-α-methylstyrene graft copolymer 110186-79-3, Acrylonitrile-butadiene-N-phenylmaleimide-styrene graft copolymer 110726-80-2, Acrylonitrile-ethylene-propylene-styrene graft copolymer
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(graft polysiloxane fireproofing agents)

L6 ANSWER 17 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:401926 CAPLUS
DN 133:31402
ED Entered STN: 16 Jun 2000
TI Flame retardants for thermoplastic resin and flame retardant resin compositions
IN Miyatake, Nobuo; Takikawa, Kazunori; Nakamori, Daisuke; Hamaguchi, Shigeki
PA Kaneka Corporation, Japan
SO PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM C08L101-00
ICS C08G077-04; C09K021-14
CC 37-6 (Plastics Manufacture and Processing)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000034392	A1	20000615	WO 1999-JP6783	19991203
	W: AU, CA, CN, JP, KR, SG, US				
	RW: BE, DE, ES, FR, GB, IT, NL				
	TW 473501	B	20020121	TW 1999-88121050	19991202
	CA 2330145	AA	20000615	CA 1999-2330145	19991203
	EP 1160290	A1	20011205	EP 1999-973301	19991203
	R: BE, DE, ES, FR, GB, IT, NL				
	US 6545116	B1	20030408	US 2000-646219	20000915
PRAI	JP 1998-348775	A	19981208		
	JP 1999-31029	A	19990209		
	WO 1999-JP6783	W	19991203		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2000034392	ICM	C08L101-00
	ICS	C08G077-04; C09K021-14
EP 1160290	ECLA	C08L025/12; C08L025/12; C08L069/00; C09K021/14
US 6545116	ECLA	C08L025/12; C08L025/12; C08L069/00; C09K021/14

AB The flame retardants have a toluene-insol. content of ≥50% and comprise crosslinked polysiloxane particles having an average particle diameter of 0.01-2000 μm. Incorporating the flame retardants into a thermoplastic resin (e.g., polyesters, polycarbonates) gives a resin composition which has excellent impact resistance and generates no harmful gases during burning, i.e., which is friendly to the environment.
ST fireproofing agent polyester; polycarbonate flame retardant impact resistance; crosslinked polysiloxane fireproofing agent
IT Polysiloxanes, preparation
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(acrylic, crosslinked; crosslinked polysiloxane particles as fireproofing agents for thermoplastics)

STN search for 10/030910

IT Fireproofing agents
(crosslinked polysiloxane particles as fireproofing agents for thermoplastics)
IT Polycarbonates, properties
Polyesters, properties
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(crosslinked polysiloxane particles as fireproofing agents for thermoplastics)
IT Fire-resistant materials
Impact-resistant materials
(impact-resistant flame retardant thermoplastic compns. containing crosslinked polysiloxane particles as fireproofing agents)
IT Polyamides, properties
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(impact-resistant flame retardant thermoplastic compns. containing crosslinked polysiloxane particles as fireproofing agents)
IT Polymer blends
RL: PRP (Properties)
(polyester-polycarbonate blends; crosslinked polysiloxane particles as fireproofing agents for thermoplastics)
IT Silsesquioxanes
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(polysiloxane-; crosslinked polysiloxane particles as fireproofing agents for thermoplastics)
IT 24968-12-5, Polybutylene terephthalate
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(Celanex 1600A; crosslinked polysiloxane particles as fireproofing agents for thermoplastics)
IT 273398-05-3P, 3-Mercaptopropyldimethoxymethylsilane-methyltrimethoxysilane-octamethyltetrasiloxane-tetraethoxysilane copolymer **273398-06-4P**, 3-Acryloyloxypropyltrimethoxysilane-dipehnyldimethoxysilane-methyltrimethoxysilane-octamethyltetrasiloxane-tetraethoxysilane copolymer 273398-07-5P 273398-08-6P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(crosslinked polysiloxane particles as fireproofing agents for thermoplastics)
IT 108554-70-7P, Acrylonitrile-butyl acrylate-styrene graft copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
(crosslinked polysiloxane particles as fireproofing agents for thermoplastics)
IT 24936-68-3, Toughlon A 2200, properties 25038-59-9, EFG 70, properties 26062-94-2 106677-58-1, ABS resin 108564-20-1, Acrylonitrile-butadiene-α-methylstyrene graft copolymer 110186-79-3, Acrylonitrile-butadiene-N-phenylmaleimide-styrene graft copolymer
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(crosslinked polysiloxane particles as fireproofing agents for thermoplastics)
IT 9002-86-2, PVC 9003-07-0, Polypropylene 9003-53-6, Polystyrene 9011-14-7, PMMA 25034-86-0, Methyl methacrylate-styrene copolymer 110726-80-2, Acrylonitrile-ethylene-propylene-styrene graft copolymer
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(impact-resistant flame retardant thermoplastic compns. containing crosslinked polysiloxane particles as fireproofing agents)
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Dow Corning Corp; JP 08113712 A CAPLUS
(2) Dow Corning Corp; EP 707031 A1 CAPLUS

(3) Dow Corning Corp; US 5508323 A 1996 CAPLUS
(4) Nec Corporation; DE 19850453 A1 CAPLUS
(5) Nec Corporation; EP 829521 A1 CAPLUS
(6) Nec Corporation; JP 10139964 A 1998 CAPLUS
(7) Nec Corporation; JP 11140294 A 1999 CAPLUS

L6 ANSWER 18 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:55587 CAPLUS
DN 128:103452
ED Entered STN: 30 Jan 1998
TI Ink-jet printing heads with a hydrophobic coating
IN Popall, Michael; Schulz, Jochen; Olsowski, Birke-E.; Martin, Adelheid; Buhler, Karl
PA Fraunhofer-Gesellschaft zur Forderung der Angewandten Forschung e.V., Germany; Popall, Michael; Schulz, Jochen; Olsowski, Birke-E.; Martin, Adelheid; Buhler, Karl
SO PCT Int. Appl., 18 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM B41J002-16
ICS C09D183-04; C09D183-06
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 74
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9800295	A1	19980108	WO 1997-DE1339	19970626
	W: CA, US				
	CA 2230584	AA	19980108	CA 1997-2230584	19970626
	EP 816094	A1	19980107	EP 1997-110566	19970627
	EP 816094	B1	20011107		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	DE 1996-19626052	A	19960628		
	WO 1997-DE1339	W	19970626		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9800295	ICM	B41J002-16
	ICS	C09D183-04; C09D183-06

AB An ink-jet printing head has a hydrophobic layer made of a polymeric material produced by using ≥1 compound XaRbSiR1(4-a-b), in which X stands for a hydrolyzable group, R stands for optionally substituted alkyl, aryl, alkenyl, alkylaryl or arylalkyl, R1 stands for an organic radical with ≥1 polymerizable group, a = 1-3, and b = 0-2. Also described are a process for producing the printing heads which includes deposition of the coating and a coating agent. Thus, (3-glycidoxypropyl)trimethoxysilane 0.4, 3-(trimethoxysilyl)propyl methacrylate 0.4, Ph2Si(OH)2 0.2, and Si(OEt)4 0.04 mol were mixed for 18 h at room temperature, heated to 70°, treated with 2.37 mol H2O in 4 equal portions at 20 min intervals, and heated a further 1 h at 70° to give a coating material, which was diluted with EtOH or PrOAc, sprayed on a printer head, and cured photochem. by use of Cyracure UVI 6974 as a photoinitiator. The coating showed wetting angles (vs. H2O) of 79° and 78°, resp., before and after contact with a com. water-based ink for 150 h at 70°.
ST ormocer hydrophobic coating printing head; trimethoxysilylpropyl methacrylate copolymer hydrophobic coating
IT Polysiloxanes, uses

Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(fluorine-containing; ink-jet printing heads with a hydrophobic coating)
IT Coating materials
(hydrophobic; ink-jet printing heads with a hydrophobic coating)
IT Ceramers
Ink-jet printer heads
(ink-jet printing heads with a hydrophobic coating)
IT Coating materials
(photocurable; ink-jet printing heads with a hydrophobic coating)
IT Fluoropolymers, uses
Fluoropolymers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(polysiloxane-; ink-jet printing heads with a hydrophobic coating)
IT **158063-70-8P**, Diphenylsilanediol-(3-glycidoxypropyl)trimethoxysila
ne-tetraethoxysilane-3-(trimethoxysilyl)propyl methacrylate copolymer
171246-99-4P, Phenyltrimethoxysilane-3-(trimethoxysilyl)propyl
methacrylate copolymer **201404-82-2P**, Diphenylsilanediol-
phenyltrimethoxysilane-3-(trimethoxysilyl)propyl methacrylate copolymer
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or
engineered material use); PREP (Preparation); USES (Uses)
(ink-jet printing heads with a hydrophobic coating)
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Am Int; EP 0367438 A 1990 CAPLUS
(2) Fraunhofer Ges Forschung; DE 19613650 C 1997 CAPLUS
(3) Geor, H; WO 9606895 A 1996 CAPLUS
(4) Siemens Ag; WO 9014958 A 1990
(5) Yamamoto, T; EP 0716051 A 1996 CAPLUS

L6 ANSWER 19 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:15960 CAPLUS
DN 128:76106
ED Entered STN: 12 Jan 1998
TI Electrically insulating silicon-containing polymer adhesives and their
manufacture and use
IN Popall, Michael; Schulz, Jochen; Olsowski, Birke-E.
PA Fraunhofer-Gesellschaft zuer Foerderung der Angewandten Forschung e.V.,
Germany
SO Ger. Offen., 6 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM C09J183-04
ICS C09J009-00; C08K005-56
CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 76
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19623501	A1	19971218	DE 1996-19623501	19960613
	EP 812894	A2	19971217	EP 1997-109169	19970606
	EP 812894	A3	19980610		
	EP 812894	B1	20010307		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	AT 199564	E	20010315	AT 1997-109169	19970606
PRAI	DE 1996-19623501	A	19960613		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES

DE 19623501	ICM	C09J183-04
	ICS	C09J009-00; C08K005-56

AB Elec. insulating adhesives are manufactured by hydrolytic condensation of compns. containing SiR4 (R = halo, OH, alkoxy, acyloxy, or chelate ligand) 1-10, R2m(R3Y)nSiX4-m-n [R2 = (O-, S-, or NH-containing) alkyl, alkenyl, aryl, alkaryl, aralkyl, alkenylaryl, or arylalkenyl; R3 = (O-, S-, or NH-containing) alkylene, alkenylene, arylene, alkarylene, aralkylene, alkenylarylene, arylalkenylene; X = halo, OH, alkoxy, acyloxy, or NR12; R1 = H or alkyl; Y = residue with ≥1 radical-polymerizable group; m = 0-3;, n = 1-3; m + n = 1-3] 20-94, and R2pSiX4-p (R2 and X = same as above) 5-30 mol%. Addition of Pt- and(or) Pd-complexes during or after the condensation provided adhesives with good storage stability. A typical adhesive was manufactured by stirring a mixture containing 3-glycidyloxypropyltrimethoxysilane 188.9, 3-methacryloyloxypropyltrimethoxysilane 189.7, Ph2Si(OH)2 84.8, and Si(OEt)4 16.7 16 h at room temperature, heating to 70° in 90 min, adding 26.1 g water 26.1, stirring until the composition was clear, and adding and 26.1 g solution containing 0.00001 N H2PtCl6 and 0.001 N hydroquinone in water, and stirring 90 min.

ST elec insulating adhesive silicon contg polymer; ethyl silicate hydrolytic copolymer manuf; diphenylsilanediol hydrolytic copolymer manuf; methacryloylyoxypropyltrimethoxysilane hydrolytic copolymer manuf; glycidyloxypropyltrimethoxysilane hydrolytic copolymer manuf; storage stabilizer platinum compd adhesive; palladium compd storage stabilizer adhesive

IT Electric insulators
Electric insulators
(adhesives; elec. insulating silicon-containing polymer adhesives)

IT Adhesives
Adhesives
(dielec.; elec. insulating silicon-containing polymer adhesives)

IT Polysiloxanes, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(elec. insulating silicon-containing polymer adhesives)

IT Stabilizing agents
(storage, platinum- or palladium-complexes; elec. insulating silicon-containing polymer adhesives)

IT 158063-71-9P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(cured; elec. insulating silicon-containing polymer adhesives)

IT **158063-70-8P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(elec. insulating silicon-containing polymer adhesives)

IT 16941-12-1, Chloroplatinic acid
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(storage stabilizer; elec. insulating silicon-containing polymer adhesives)

L6 ANSWER 20 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:480761 CAPLUS
DN 127:96631
ED Entered STN: 02 Aug 1997
TI Heat- or active-energy-ray-curable high-solid coating compositions and methods of their film forming
IN Nakao, Fumiteru; Nakazono, Shunsuke
PA Kansai Paint Co., Ltd., Japan

STN search for 10/030910

SO Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C09D005-00
ICS B05D001-02; B05D007-24; C09D201-00
CC 42-9 (Coatings, Inks, and Related Products)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09143399	A2	19970603	JP 1995-304239	19951122
PRAI JP 1995-304239		19951122		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 09143399	ICM	C09D005-00
	ICS	B05D001-02; B05D007-24; C09D201-00

AB Title compns. contain (A) 100 parts heat-curable coating compns. and (B) 1-10 parts active-energy-ray-curable multifunctional unsatd. monomers and/or active-energy-ray-curable prepregs; the solid content B of the title coatings is ≥75% during coating process. The coating films on out panels of automobiles are obtained by spraying the title coating compns. under irradiation of active energy rays.

ST heat energy ray curable coating automobile; spray energy ray irradn coating automobile; UV curable epoxy polyester polysiloxane coating

IT Coating materials
(UV-curable; heat- or UV-curable high-solid epoxy coating compns. and methods of film forming)

IT Coating materials
(curable; heat- or active-energy-ray-curable high-solid coating compns. and methods of film forming)

IT Polysiloxanes, uses
Polysiloxanes, uses
Polysiloxanes, uses
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(epoxy-polyester-; heat- or active-energy-ray-curable high-solid epoxy-polyester-polysiloxane coating compns. and methods of film forming)

IT Polyesters, uses
Polyesters, uses
Polyesters, uses
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(epoxy-siloxane-; heat- or active-energy-ray-curable high-solid epoxy-polyester-polysiloxane coating compns. and methods of film forming)

IT Coating process
(heat- or active-energy-ray-curable high-solid coating compns. and methods of film forming)

IT Epoxy resins, uses
Epoxy resins, uses
Epoxy resins, uses
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(polyester-siloxane-; heat- or active-energy-ray-curable high-solid epoxy-polyester-polysiloxane coating compns. and methods of film forming)

IT 192062-31-0, Diphenylsilanediol-ERL 4221-trimethylolpropane triacrylate copolymer

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(coatings; heat- or active-energy-ray-curable high-solid epoxy coating compns. and methods of film forming)

IT **192062-33-2**, γ-Acryloxypropyltrimethoxysilane-diphenylsilanediol;ERL 4221;methyltrimethoxysilane copolymer
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(heat- or active-energy-ray-curable high-solid epoxy coating compns. and methods of film forming)

L6 ANSWER 21 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:731835 CAPLUS
DN 125:331837
ED Entered STN: 13 Dec 1996
TI Printing inks cureable by low-pressure mercury lamps
IN Kappel, Juergen; Kron, Johanna; Martin, Adelheid; Wolter, Herbert; Popall, Michael
PA Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung e.V., Germany
SO Ger. Offen., 26 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM C09D011-10
ICA C08J003-28; C08J003-24; C08L083-04; C08L085-00; C08L083-07; C08L083-06
CC 42-12 (Coatings, Inks, and Related Products)
Section cross-reference(s): 74
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 19515756	A1	19961031	DE 1995-19515756	19950428
PRAI DE 1995-19515756		19950428		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 19515756	ICM	C09D011-10
	ICA	C08J003-28; C08J003-24; C08L083-04; C08L085-00; C08L083-07; C08L083-06

AB The title inks, which cure rapidly and can be used in high-speed roll printing, contain pigments, photoinitiators, and, as binders, mixts. of 20-95% SiO2 (hetero)polycondensates prepared by hydrolytic polymerization of silanes (optionally containing B, Al, P, Sn, Pb, transition metals, lanthanides, or actinides) and 20-100% (based on monomers) hydrolytically-polymerizable silanes of specified structure. An unpigmented film of trimethylolpropane diacrylate 3-[[3-(dimethoxymethlsilyl)propyl]thio]propionate [prepared from trimethylolpropane triacrylate and 3-(dimethoxymethylsilyl)-1-propanethiol] containing 3% Irgacure 184 could be cured tack-free by UV light (0.49 W/cm2) in 20 s.

ST binder printing ink photocurable; polysilane binder photocurable ink; trimethylolpropane acrylate reaction mercaptopropylsilane

IT Polysilanes
RL: TEM (Technical or engineered material use); USES (Uses)
(binders; printing inks cureable by low-pressure mercury lamps)

IT Inks
(printing, UV-curable, printing inks cureable by low-pressure mercury lamps)

IT 146124-41-6 **158063-70-8**
RL: TEM (Technical or engineered material use); USES (Uses)

(binders; printing inks cureable by low-pressure mercury lamps)
IT 138170-29-3P, Trimethylolpropane diacrylate 3-[[3-(dimethoxymethlsilyl)propyl]thio]propionate
RL: IMF (Industrial manufacture); PREP (Preparation)
(printing inks cureable by low-pressure mercury lamps)
IT 15625-89-5, Trimethylolpropane triacrylate
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with (dimethoxymethylsilyl)propanethiol)
IT 31001-77-1, 3-(Dimethoxymethylsilyl)-1-propanethiol
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with trimethylolpropane triacrylate)

L6 ANSWER 22 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1994:607730 CAPLUS
DN 121:207730
ED Entered STN: 29 Oct 1994
TI Silicon-based inorganic-organic polymer lacquer prepared by precondensation with good adhesion to capacitor, circuit board, chip, wafer, and the like
IN Popall, Michael; Schulz, Jochen; Olsowski, Birke; Pilz, Monika
PA Fraunhofer-Gesellschaft zur Foerderung der Angewand, Germany; du Pont de Nemours, E. I., and Co.
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C08G077-22
ICS C08G077-06; C09D183-04
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 76
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9325604	A1	19931223	WO 1993-EP1428	19930605
	W: JP, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	FR 2692274	A1	19931217	FR 1992-7006	19920610
	EP 644908	A1	19950329	EP 1993-912900	19930605
	EP 644908	B1	19980902		
	R: BE, DE, FR, GB, IT, LU, NL, SE				
	JP 07507822	T2	19950831	JP 1993-501100	19930605
	US 5734000	A	19980331	US 1995-351357	19950213
PRAI	FR 1992-7006		19920610		
	WO 1993-EP1428		19930605		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9325604	ICM	C08G077-22
	ICS	C08G077-06; C09D183-04

AB The lacquer is obtained by the steps of (i) precondensation of (a) 1-10 mol % of ≥1 silane SiR4; (b) 20-94 mol % of ≥1 org silane R''m(R'''Y)nSiX(4-m-n); (c) 5-30 mol % of ≥1 org silane R''pSiX4-p; (d) optionally 0-10 mol % of ≥1 low-volatility metal oxide; and (ii) hydrolysis condensation of the precondensate of step (i) in the presence of the stoichiometric amount of H2O. Precondensation and condensation of a mixture of 3-glycidoxypropyltrimethoxysilane 0.4, 3-methacryloxypropyltrimethoxysilane 0.4, Ph2SiOH2 0.2, and tetraethoxysilane 0.04 mol gave a lacquer which was applied onto PET thin film capacitor and photocured.
ST glycidoxypropyltrimethoxysilane condensate coating;

methacryloxypropyltrimethoxysilane condensate coating; diphenylsilanediol condensate coating; tetraethoxysilane condensate coating; ceramer siloxane silicate coating; PET capacitor ceramer coating

IT Electric capacitors
(film, polyester, coatings for, silicate-siloxanes as)

IT Coating materials
(lacquers, silicate-siloxanes, with good adhesion to capacitor)

IT Siloxanes and Silicones, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(silicate-, coatings, with good adhesion to capacitor)

IT Silicates, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(siloxane-, coatings, with good adhesion to capacitor)

IT 1344-28-1, Alumina, miscellaneous
RL: MSC (Miscellaneous)
(coatings on, silicate-siloxanes for)

IT 158063-71-9
RL: TEM (Technical or engineered material use); USES (Uses)
(coatings, with good adhesion to capacitor)

IT 158063-72-0
RL: TEM (Technical or engineered material use); USES (Uses)
(coatings, with good adhesion to circuit board)

IT **158063-70-8P**
RL: PREP (Preparation)
(preparation of, by precondensation, for lacquer)

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(FILE 'HOME' ENTERED AT 11:28:17 ON 26 NOV 2004)

FILE 'REGISTRY' ENTERED AT 11:28:27 ON 26 NOV 2004
L1 4502 S TRIMETHOXYSILANE
L2 1725 S ACRYL? AND L1
L3 224 S L2 AND PHENYL
L4 16 S L2 AND DIPHENYL
L5 1 S 947-42-2

FILE 'CAPLUS' ENTERED AT 11:31:07 ON 26 NOV 2004
L6 22 S L4

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	63.36	116.60
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
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STN INTERNATIONAL LOGOFF AT 11:31:29 ON 26 NOV 2004